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LECTURES
ON THE
THEORY AND PRACTICE OF MEDICINE;

NOW IN COURSE OF DELIVERY AT THE THEATRE OF ANATOMY AND MEDICINE, WEBB-STREET, SOUTHWARK.

BY

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TUBERCLE.—*The destructive tendency of this formation; the causes; the influence of age, sex, and of season; not confined to cold climates. Tubercle occurs more frequently in the female than in the male. The result of M. Louis's labours communicated. The appearances and changes of tubercle. The granulations of Bayle. Lesions which present themselves in phthisical patients described. Inflammation of the chest. Ulcerations of the air-passages and intestinal canal. Lesions of the heart and blood vessels. Fatty liver. Spleen and Kidneys. Lesions of the brain which occur in phthisis.*

GENTLEMEN:—I have thus given you as *useful* and as *practical* a view of inflammation as possible. I now proceed to do the same in regard to tubercles. After inflammation, tubercle is the most important of the subjects comprised in the theory of medicine, or pathology.

Whilst inflammation frequently constitutes processes of reparation or restoration, and effects those purposes in the most marvellous manner, unaided, or directed by the skill of the surgeon, the tendency of tubercle is always destructive; it arises from a morbid condition of the system; and it issues in devastations of the part or parts affected, which, if internal, ultimately prove fatal.

It is true that inflammation frequently induces the effusion or secretion of serum and pus, which, being fluid, have no tendency to become organised; or the softening or ulceration of parts, which are destructive processes; but, frequently, instead of these, coagulable lymph or albumino-fibrine is deposited, and this substance generally tends to become assimilated with the living solids; the process is one of restoration, or of reparation. Some degree of softening and actual ulceration even may, in this manner, be effectually remedied.

But in the case of tubercle, everything tends to destruction, to disorganisation; the tubercle itself, solid at the first, softens, liquefies; the organ in which it is situated, and the system at large, are involved in fatal changes.

This distinction between inflammation and tubercle, and other morbid processes of a similar tendency, has been forcibly insisted on by Lobstein, who has expressed the two modes of action by distinct terms; the first he designates by the term *cuplasy*; it obtains in the formation of cicatrix, &c.; the second he terms *cacoplasis*; it leads to deposits which tend to softening and destruction; such are tubercle, melanosis, encephalosis, scirrhus, &c. The former is usually a topical affection; the latter arise from a morbid diathesis of the system, and invade several organs or systems simultaneously

Tubercle is hereditary, and, doubtless, frequently congenital. It is heterogeneous from the living solid, and incapable of organisation.

It is to the works of Bayle and Laennec, of M. Louis and M. Andral, and Dr. Carswell, that we are chiefly indebted for our knowledge of tubercle.

I. *The Causes of Tubercle.*

The causes of inflammation are principally external, and only occasionally constitutional; the causes of tubercle are almost invariably such as induce a morbid diathesis, a sort of cachexia, through the medium of which tubercle is generated. This diathesis is the result of—

1. *Hereditary disposition.*
2. *Cold and damp soil, or air.*
3. *Insufficient food.*
4. *Insufficient clothing.*
5. *Insufficient exercise, air, or light.*
6. *The depressing passions.*
7. *Attacks of fever, inflammation, dyspepsia, &c.*

8. *The use of bloodletting, mercury, &c.*

To my account of the immediate *causes* of tubercles, I must add that of the *influence*,—

1. *Of age;*
2. *Of sex;*
3. *Of season, &c.*

Innumerable painful facts prove the existence and influence of hereditary disposition to tubercle. The youthful members of a family are frequently affected with tubercles in succession; in one family the disease may affect the lungs, in another it may affect the mesenteric glands, in several individuals in succession. Tubercles have been found in the lungs of the fœtus.

Tuberculous disease is frequent in cold and damp situations. It is far less so on high mountains, as the Alps, and on seacoasts. The late Dr. Wells has, however, adduced many interesting facts, which tend to prove that tuberculous disease is little known in localities in which intermittent fever prevails. He attempts to explain this fact on the principle "that the existence of one disease in the human body, or even a tendency to one disease, often renders it less susceptible of another." Neither the northern parts of Europe and America, nor the temperate climates of France, Spain, Italy, and Greece, enjoy any immunity from this terrible disease. The inhabitants of the country are less subject to tubercles than those of towns, and especially than those of crowded cities.

It is a prevailing opinion that deficient food and clothing predispose to tuberculous disease. Dr. Withering stated, in a letter to Dr. Beddoes, published in 1793, that butchers are exempt from consumption. It is also generally admitted that the want of exercise and the privation of wholesome air, and of light, have the same baneful influence in disposing to this disease.

That the depressing passions have a similar influence, even when no predisposition to tubercular affection existed, I have recently, alas, had painful evidence, in the case of a near relative. Laennec observes, "Parmi les causes occasionelles de la phthisie pulmonaire, je n'ai pas connu de plus certaines que les passions tristes, surtout quand elles sont profondes et de longue durée."

Attacks of fever, of inflammation, of acute dyspepsia, have led to the development of tubercles; the excessive loss of blood, and the influence of mercury, have a similar baneful tendency.

In general, whatever impairs the strength and the tone of the system, favours the formation of tubercle; whilst whatever invigorates and nourishes, operates as a preventive of this direful malady.

Such are the principal circumstances which promote, or obviate, the tendency to tubercle. There are two other conditions of the system which co-operate with this tendency.

The first of these is the youthful age of the patient. Tubercle has, indeed, been observed in the fœtus, in children of less than a year old, and in octogenarians; but it occurs most frequently between the ages of fifteen and fifty. The following table, taken from Bayle, displays the mortality from *pulmonary* tubercle, in the different ages:—

Ages.				Deaths.
From 15	to	20	years	10
20	.....	30	.....	23
30	.....	40	.....	23
40	.....	50	.....	21
50	.....	60	.....	15
60	.....	70	.....	8
				100

This agrees very nearly with the subsequent observations of M. Louis, as set forth in the following table:—

Ages.				Deaths.
From 15	to	20	years	11
20	.....	30	.....	39
30	.....	40	.....	33
40	.....	50	.....	23
50	.....	60	.....	12
60	.....	70	.....	5
				123

Laennec simply remarks, in opposition to the statement of Bayle, that the female sex is more subject to pulmonary tubercle than the male. M. Louis observes that, of the 123 patients of whom the several ages are given in the preceding table, 70 were women, and 58 men, and of 43 patients who died of other chronic diseases, tubercles were found in the lungs of 25 women and of 15 men; the sums of these two series being 95 and 73.

Season would appear to have little influence on the development and progress of tubercle, if we may judge from the subjoined table of the deaths in 244 cases of phthisis, taken from Bayle; of these—

54	occurred in	Spring
68	.....	Summer
64	.....	Autumn
58	.....	Winter

Having made these remarks on the *causes* of tubercles, drawn from my own observation and reading, I shall now introduce the first part and specimen of an invaluable manuscript, confided to me for this purpose, by my friend M. Louis, and containing the result of his labours *before* and *since* the publication of his incomparable work upon phthisis:—

"*Causes.*—The analyses to which I have devoted myself have less enabled me to discover the causes of phthisis than to appreciate certain opinions of authors upon this subject. In studying two orders of facts,

the first relating to cases of phthisis, the second to cases of other diseases, in a certain number of which there were tubercles in the lungs, I have found that phthisis is less frequent in men than in women, in the proportion of 55 to 72, a difference of some importance, and confirmed by researches made since the publication of my work on phthisis.

"Since this publication, too, M. Benoiston, de Chateau Neuf has analysed a still more considerable mass of facts, taken from the registers of the hospitals of Paris, and has arrived at a similar result, the proportion being, after the age of 15, as 3 to 5.

"A similar remark applies to infancy before the age of 15. M. Papavoin has found that in 532 children of the female sex, and between 2 and 15 years of age, who died at the *Hopital des Enfans*, 338, or about 2-3rds, had tubercles; whilst in 387 boys, only 210, or 7-13ths, a little more than one-half, were so affected.

"On the other hand, severe pneumonia and catarrh are more frequent in men than in women, nearly in the proportion of 2 to 1, a fact which contradicts the general opinion that inflammations of the lung are the most frequent cause of phthisis.

"In addition to this I may observe, that in 11 cases of dilatation of the bronchia, of from 2 to 6 years' duration, in subjects who had not experienced symptoms of phthisis, I found in 8 the mucous membrane of the bronchia of triple or quadruple its natural thickness, of an intense redness, and as if granulated; in a word, manifestly inflamed; and yet in the whole 11 cases, 3 only were complicated with tubercles, a proportion similar to that observed in other cases of fatal disease, not phthisical.

"Emphysema of the lungs is generally accompanied by cough and chronic pulmonary catarrh, which may continue 10, 20, or 30 years, or more, without producing the symptoms of tubercles.

"Of 44 subjects who died of disease of the heart, whose cases I took at *La Charité*, 19 had hypertrophy of the right auricle, with or without dilatation, and 29 had a similar affection of the corresponding ventricle; 6 of the 29 had the pulmonary artery dilated and hypertrophied even to its minutest divisions, a result of the augmented force with which the blood had been propelled along it. Yet of the whole 44 cases, 2 only were affected with tubercles, and these in but small number; whereas, in 50 cases of cancer of different organs, in patients of the same age, taken at the same time, 11 presented tubercles.

"Lastly, when we only find tubercles or grey semi-transparent granulations in the lung, the bronchia offer no traces of inflammation. They are only inflamed, with redness and thickening, in cases of excavation, and then only those branches which are in communication with those excavations. Hence we must conclude, that inflammation is an *effect*, and that, doubtless, of the continual contact of the sputa or contents of the cavities with the bronchial mucous membrane, and not the *cause* of the tubercles.

"On the other hand, of 46 subjects carried off by typhoid fever, 4 presented some tubercles or semi-transparent grey granulations at the summit of the lungs; and these subjects had died from the 25th to the 46th day of the disease, whereas, none of those who died before the former period, presented any tuberculous affection. We must thus conclude, that the protracted duration of the disease had contributed to the formation of the tubercles.

"The influence of climate is not so incontestibly proved as is generally supposed, for this proof can only result from calculations, and the materials for these calculations probably exist only at Paris, where the subjects are opened in all the establishments.

"Almost all the monkeys which die at Paris die of tubercles, and it has been concluded that they die from the influence of cold. But before coming to such a conclusion, it would be necessary to ascertain, first the proportion of tubercles in the monkey tribe in hot climates, and in the second place the influence of a change in habits, nutriment, &c. Almost all the cows kept in stables in Paris are said to die of tubercles; here we cannot suspect the influence of cold.

"A fact already mentioned, viz., the greater prevalence of phthisis amongst women than men, should lead to the same result, for the former are far less exposed to the alternations of heat and cold than the latter.

"Tight stays and other clothing have been considered as a cause of phthisis; and this idea has seemed to be supported by the fact just mentioned of its greater frequency amongst women than men. But this cause can scarcely be supposed to operate amongst the patients of *La Charité*, from whose cases I have deduced my conclusions; and we must not forget that phthisis prevails more in the female sex in infancy.

"On the other hand, these latter facts seem to support the ancient idea of the lymphatic temperament being a predisposing cause of tubercles."

II. *The Appearances and Changes of Tubercles; the Granulations of Bayle.*

Tubercle, in its simplest and least dangerous form, consists of opaque bodies of ayellowish-white colour, of the consistency of very viscid pus, or of cheese, the particles of which have little cohesion,—varying in size from that of a millet seed to that of a pea or of a nut,—sometimes isolated and globular or oval, sometimes agglomerated into masses of various size and form, some-

times infiltrated into the tissue of the organ in which it is situated, and sometimes surrounded by a distinct cyst.

Tubercle occurs then under the following forms principally:—

1. *The Isolated.*
2. *The Agglomerated.*
3. *The Infiltrated.*
4. *The Encysted.*

Tubercle appears to be a formation or secretion totally distinct or heterogeneous from any natural or morbid structure; it is inorganisable, and incapable, of course, of being injected; it is as a foreign body in the midst of the living solid, and there is a constant disposition, in that solid, to effect its solution and discharge from the body.

Bayle has described an appearance in the lungs which he has designated by the term *granulations*; he observes:—"The lungs are studded ("farcis," whence the term used by veterinarians) with miliary, shining, transparent granulations, sometimes marked with brilliant, black points or lines. These granulations appear of the nature and consistence of cartilage; their size varies from that of a millet seed to that of a grain of wheat; they are never opaque, and do not soften. By these characters they are distinguished from miliary tubercles, which have the same magnitude, but are always grey, or white, and opaque, and which eventully soften completely.

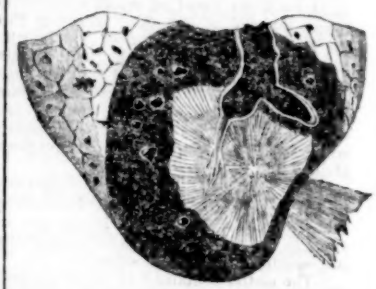
Laennec is of opinion that these granulations are the first stage of tubercle. M. Louis is of the same opinion. M. Andral, on the contrary, contends that they are merely inflamed portions of the pulmonary lobules. We shall advert to this subject hereafter.

Tubercle appears to be a morbid *secretion*. Its size augments by the addition of fresh particles of the same kind. It at the first infiltrates the texture in which it is found; afterwards it becomes isolated from that texture, except in the case of diffused infiltration. It then becomes infiltrated itself, *softened*, and transformed into a puriform fluid. It acts as a thorn or other foreign body, inducing the secretion of pus in the textures by which it is contained. Eventually, like such other foreign body, it is, if possible, removed from the economy. It then leaves a cavity, an *ulcer*, which, in rare instances, contracts and cicatrizes.

The two subjoined woodcuts represent a tuberculous cavity, and such a cavity cicatrized.

The first represents a cavity traversed by obliterated vessels, lined by a uniform layer of albumino-fibrine.

The second represents a firm cicatrix, with a depression on the surface of the truncated bronchial tube.



Ordinary tubercles contain about 98 parts of animal, and 2 parts of saline, matter, viz., the muriate of soda, and the phosphate and carbonate of lime. In some cases they undergo a *calculous* transformation, and they then consist of 3 parts of animal, and 97 parts of saline, matters. This calculous transformation is observed in the lungs, in the mesentric glands, &c. It is opposed to softening.

Tubercles are principally developed in the cellular membrane of organs. They may be sub-mucous, sub-serous, intra-muscular: they may occur in the substance of the cerebrum and cerebellum, the liver, the spleen, the kidney, the testis, the absorbent glands, the bones, &c. Tubercle has been seen on the surface of mucous membrane, free from ulceration; in the mucous follicles; and in the lymphatic vessels: in these, and some other cases, it is obvious that other textures beside the cellular membrane, had poured out tuberculous matter.

I must now beg your sustained and best attention to another part of M. Louis's manuscript:—

"*Lesions.*—It is rare to find in the lungs only tubercles, or semi-transparent grey granulations. I have seen the first case only twice, and the second five times; yet even then there were some granulations more or less opaque and yellowish in both instances.

"In one case in three, the grey, semi-transparent granulations are greatly multi-

plied immediately under the pleura.

"These granulations may acquire the volume of a pea, in the space of three or four weeks, and not exceed it even in four years.

"Though the grey matter presents itself under the form of granulations, or of irregular masses, more or less considerable, it changes, sooner or later, into tuberculous matter.

"Tubercles are almost always found in both lungs. I have seen them confined to the left lung five times, and to the right twice.

"Encysted tubercles are rare; I have only once met with them, and then at the summit of the superior lobes.

"I have not found an empty excavation before the end of the third month of the affection, or the beginning of the fourth, and then the false membrane which lined the excavation was soft and of little consistence; whilst it is dense, greyish, *almost* semi-transparent, semi-cartilaginous, generally lined with another false membrane, which is soft and yellowish in excavations of long duration.

"There are generally excavations in both lungs; so generally, indeed, that I have only found exceptions to this rule in one case in six. In one case in ten, these excavations are equally large on both sides.

"The matter contained in these excavations varies principally according to their duration and their structure; perhaps, also, according to the more or less protracted difficulty of the circulation in the last moments of life. Thus, when the cavities are recent, the matter in question is straw-coloured, and like ordinary pus. When they are of some duration, and especially when irregular in form, the matter is greyish, greenish, and looks dirty and disagreeable; sometimes stained with blood: this last discolouration doubtless supervenes some *hours* before death; for it is not rare; and it is, on the contrary, very rare to see the sputa red during the last, or the two last, *days* of existence.

"Instead of air and pus, I found, in one case, rather a large excavation occupied by a fibrous matter, already organised, the result of a hæmoptysis which had taken place a few days before death.

"Bronchial ramifications are never found in the interior of tuberculous excavations, or in the grey semi-transparent substance; which indicates that the first effect of the development of this matter is the destruction of the bronchia in that part where it takes place. And this destruction does not appear to be the consequence of the transformation of the bronchia into grey, semi-transparent, or tuberculous matter; for no such transformation takes place in the vicinity of cavities, or of tuberculous masses, or in any part whatever of the lungs, not even where the bronchia present some organic change.

"The bronchia are rarely red in the neighbourhood of tubercles which have not suppurated: they are redder and thicker in proportion as they communicate with the older excavations,—an indication that this redness and thickening are the results of the habitual passing of the purulent matter from the cavities along their course.

"Pneumonia is frequent in the least stages in phthisis. I have observed it in one case in three, sometimes in the first, sometimes in the second degree. I have also met with it in subjects carried off by other chronic diseases; 22 times in 112 cases: it must, therefore, be concluded, that tubercles have not a very great influence upon the development of pneumonia in the last stages of phthisis.

"But it is very different with regard to adhesions of the pleura. The influence of tubercles, in producing this effect, is so great, that in 112 cases, I only was found with both lungs perfectly free from adhesions. On the contrary, in 110 cases of other organic diseases, and certainly at more advanced ages, 35 only presented such adhesions. There exists also a constant proportion between adhesions and other effects of tubercles. Where there are no adhesions, there are also no cavities. Where the adhesions are slight, the cavities are small, or absent altogether. Lastly, where the adhesions are firm, and more or less extensive, or even universal, there are constant excavations, and, in a great majority of cases, these are considerable, or even very large.

"Large excavations occupy the summit of the lungs, and are very near their surface; it is also in this situation that we find those false membranes which are so thick and so strong as to strengthen, or sometimes even to constitute, their parietes to a certain extent. This sort of cartilaginous covering is peculiar to phthisis, being met with in no other disease.

"Recent pleurisy has occurred in the latest period of phthisis in one case in 10; in other chronic diseases, in one case in 13.

"The reverse of this is observed in regard to hydrothorax. It has occurred in one case in 10 of phthisis, and in one case in 4 of other diseases; a difference which corresponds to the comparative frequency of adhesions of the pleura, in these cases respectively.

"The frequency of ulcerations augments as you pass downwards from the epiglottis to the trachea. In 100 cases of phthisis, they were found 18 times upon the epiglottis; 22 times within the larynx; and 31 times in the trachea.

"The largest ulcerations of the trachea affect the soft, or muscular, texture. Five times out of the number mentioned, I have found the mucous membrane entirely de-

stroyed in all, or nearly all, the extent of this organ. In the first stage of these ulcerations, the mucous membrane alone is destroyed, whilst the sub-mucous tissue becomes thickened; afterwards the latter ulcerates, whilst the muscular tissue thickens; and lastly, the muscular tissue ulcerates, as the mucous membrane is destroyed.

"The greater frequency of extensive ulcerations in the trachea seems to be explained naturally enough by the habitual contact of the sputa with this part, either when they are delayed in it or pass along it, especially as in the case in which the mucous membrane of the trachea is reddened and not ulcerated; this redness was generally accompanied by thickening, and was greater in the muscular portion than in any other part. Still we must admit that ulcerations depend upon some other cause, for they are not always in proportion to the bad condition of the sputa, or the size or duration of the cavities.

"The most usual seat of the ulcerations of the larynx is at the union of the vocal chords,—the most dependent part of this organ in the horizontal position. The ulcerations of the epiglottis are confined to its inferior part; at least I have not met with a case in which they were situated on its lingual surface.

"The two last facts support the idea, that the ulcerations of the aerial tube depend upon the contact of the sputa. The softening of tubercles, which is so frequently the cause of ulcerations of the intestine, has no influence in the development of those of the aerial tube, for I have not found either tubercles or semi-transparent grey granulations in this part during 15 years.

"Is is a remarkable fact, that in no case of chronic disease without tubercles have I found ulcerations of the epiglottis, larynx, or trachea, not even in cases of gangrene of the lung of long duration, although I have taken ten cases of this last affection. Ulcerations of the aerial tube imply, therefore, a particular predisposition, for it is not enough that an acrid fluid should be continually passing through them.

"We must, however, notice, as an exception to the law which has just been announced, the ulcerations which arise from syphilis.

"It may, perhaps, be said, that there are facts which demonstrate the incorrectness of this law, especially those contained in the inaugural dissertation of M. Cazol, on "La Phthisie Trachéale;" but three of M. Cazol's cases arose from the pressure of tumours exterior to the aerial tube; in two others, it is not stated whether the patients had suffered from syphilis, a fact ascertained in regard to one case alone, which consequently remains as the only exception to the law mentioned above. Such an exception has not occurred to me during 15 years of observation in more than 1200 subjects, in whom the trachea was examined with care.

"Among acute diseases, *one* only of those whose seat is not primarily in the trachea, is sometimes accompanied with ulcerations of this organ, viz., confluent variola, in which 3 out of 4 cases present ulcerations of the trachea, very different, however, from those of phthisis, being superficial, small, generally covered with a membraniform pellicle; so that, by an inspection of the trachea alone, of a phthisical patient, in which ulceration had occurred, we might ascertain the disease of which the patient had died.

"What has been said of ulcerations of the trachea, is also true of those of the larynx, at least I have not found such ulcerations in any chronic disease, except phthisis and syphilis.

"It is an error to have assigned phthisis as a cause of aneurism of the heart. In 112 cases, 3 only presented evident enlargement of the heart, and this of the *left* ventricle only, and not of the *right*, as would have been the case if the phthisis had been its cause. To this we may add, that enlargement of the heart occurs with equal frequency, the age being the same, in other chronic diseases.

"In regard to the aorta, its calibre is less in phthisical patients than in other subjects of the same age, carried off by acute diseases.

"The pharynx and œsophagus are almost always healthy in phthisical patients. I have never found tubercles or grey semi-transparent granulations. Twice only in 80 cases have I found moderately numerous and superficial ulcerations. In no case have I found such ulcerations in chronic diseases not tuberculous.

"The stomach is more frequently augmented in volume in phthisis than in other diseases, acute or chronic. In 9 out of 96 cases of phthisis, and in 2 out of 230 of other diseases, the stomach was twice or thrice its natural size, and below its natural position. One of these two was a disease of the heart; the other, caries of the vertebra. In all these cases, the liver was also enlarged, and had descended below its ordinary position, a fact which may be viewed as a cause of the condition of the stomach.

"The mucous membrane of the stomach is rarely perfectly healthy; it was found so in 19 cases only out of 96; in the rest it was,—

"1. Softened, thin, or destroyed, over a variable space, situated more frequently in the great curvature than elsewhere, around which it was generally more or less mammelated and red, in 19 cases.

"2. Red and sometimes thickened, mammelated, softened at its anterior part alone, which was more or less covered by the enlarged liver, in 8 cases; this state, manifestly inflammatory, was

evidently owing to the compression of the liver, a fact which explains its greater frequence in women than in men, in the proportion of 7 to 1, in whom also the liver is more frequently enlarged and fatty.

"3. Softened, and of a more or less obscure red colour in the great curvature, sometimes with thickening, that is, evidently inflamed in this part, in 17 cases.

"4. Mammelated, greyish, rarely reddish, sometimes thickened with small ulcerations, in 18 cases.

"5. Ulcerated without other lesions, in 2 cases.

"6. Of a more or less vivid red, in all its extent, without alteration in thickness or consistence, in 6 cases. This redness, on account of gastric symptoms having supervened in several cases two or three days before death, must be considered as inflammatory.

"7. Softened, without alteration of colour or thickness, in 4 cases.

"8. Raised by a white, bluish, milky, thickish fluid, in 1 case.—77 Cases.

"But these lesions are not peculiar to phthisis; they occur in other proportions in other chronic diseases. In 94 cases of the latter, the mucous membrane of the stomach was—

"1. Thin, softened, and sometimes destroyed, in 6 cases.

"2. Red, and a little mammelated at its anterior part, in 2 cases.

"3. Softened, of a more or less vivid red, in the great curvature, in 6 cases.

"4. Mammelated, greyish, sometimes thickened or ulcerated, in 16 cases.

"5. More or less red in its whole extent, without softening, in 18 cases.—48.

"It thus appears that the mucous membrane of the stomach was more or less affected in one-half of these cases; whilst in phthisis it was affected in four-fifths.

"The small intestine is much more rarely in a perfectly healthy state than the stomach. Its mucous membrane was softened in its whole extent, in 8 cases out of 95,—in 3 in a moderate degree, in 5 reduced to the consistency of a pulp, and in 3 affected with thickening and redness.

"In 36 cases out of 95 I found, in different parts of the small intestines, granulations more or less yellow or whitish, and evidently tuberculous: and since the publication of my 'Researches' I have arrived at a similar conclusion, by the analysis of 61 cases of phthisis, in which there were 27 instances of this lesion.

"Ulcerations take place in a proportion still more considerable, so that I have observed them 78 times out of 95 cases,—a fact which shows that they are not all caused by the abundance of tubercles, although these appear to be their principal cause.

"Besides, with few exceptions, the number, the size, and the depth of the ulcerations augment in proportion as we approach the cæcum; and, if we suppose the intestine divided into 3 portions, we find ulcerations in the greatest number of cases only in the third nearest the cæcum, or at the most, in this and the middle third. It is much less common to find them in the whole length of the intestine,—a fact, which I have observed, however, in 1 case in 6; whilst I have only seen them confined to the middle third 3 times.

"Their size varies from 1 line to 5 or 6 inches; when small, they are placed almost exclusively opposite the mesentery, in points corresponding to Peyer's glands, which we can no longer distinguish, or very imperfectly. In the highest degree of their development, they occupy the whole surface of the intestine to a variable extent longitudinally.

"Their form generally indicates their origin, and varies with their size, when small and circular, like those which succeed immediately to the softening of tubercles. When of a moderate size, they have the elliptical form of the clusters of Peyer's glands, which they occupy. This latter form is the most frequent; the annular form is next so; the linear form is the most rare; I have only observed it in 7 cases, and it has generally been in the first half of the intestine.

"Their structure varies like their size, and they follow the same course as those of the trachea.

"We observe redness, thickening, and softening of the mucous membrane of the small intestine, simple or complicated, in subjects carried off by other chronic diseases besides phthisis. But we meet with tuberculous granulations only in cases in which tubercles exist in the lungs. If this statement be not absolutely true, it is very nearly so; so that in 82 cases of fatal chronic diseases, without pulmonary tubercles, 3 only had ulceration of the small intestine: of these 3, 2 were dysenteric patients; and in 1 the ulcerations were small and few in number, being scarcely 10 lines in diameter; so that, if every kind of ulceration of the small intestine be not absolutely peculiar to phthisis, ulcerations to a certain extent are really so.

"The changes in the large intestine, are the same as those in the small intestine, but in different proportion, so that I have found it perfectly healthy 3 times only in 95 cases.

"Of that number, the mucous membrane of the colon was,—

"1. Reddened in all its length, in 27 cases; interruptedly in 12; without interruption in 15; and this redness was very intense, except in 3 cases.

"2. It was softened in 61 cases; either in all its extent, or in a part of its extent only; generally without alteration of colour.

"When red and softened, the mucous membrane of the colon is often mammelated, thin, like that of the stomach in similar circumstances. Sometimes it is destroyed over a considerable extent, and the cellular tissue laid bare is much thickened, though retaining its whiteness.

"When softening is united to redness and thickening of the mucous membrane, it is evidently inflammatory; but what shall we think of softening alone?

"Tuberculous granulations existed in 1 case in 6, or 13 times in 95 cases. Ulcerations are much more common: I found them in 70 cases; almost as frequently, indeed, as in the small intestine; they are inconsiderable in 3 cases out of 4, that is, from 3 to 4 lines in diameter, or even less, and are then frequently distributed uniformly along the whole intestine. In other cases, the frequency of the ulcerations diminishes as we ascend from the cæcum to the ascending colon, to the transverse colon and rectum, in the ratio of 17, 11, 8, and 4. The largest are those of the cæcum, and of the adjacent portion of the colon. I have seen them occupy the whole contour of the cæcum and of the ascending colon uninterruptedly for the space of 8 or 9 inches in length; whilst the largest ulceration I have observed in the rectum was not more than 2 inches in breadth.

"The ulcerations of the intestine are frequently independent of inflammation; at least, this is evident at their commencement, in regard to the small intestine, in a great number of cases, in which they are the result of the softening of tubercles; for the development of these cannot be attributed to the inflammation of the mucous membrane, the adjacent part of which remains unaffected, as long as they remain unsoftened. The same thing obtains in some cases in regard to the large intestine, and for the same reasons. In the cases in which we cannot refer them to the softening of tubercles, of which there are no traces, we cannot consider them as the effect, at least solely, of inflammation; inasmuch as this does not commonly develop itself in isolated portions in the intestine; and in regard to the small intestine, although the traces of inflammation are much less frequent, ulcerations are much more so than in the colon. But if these ulcerations be ascribed to inflammation, this must be supposed to have a special character, or at least a special seat, since the ulcerations generally occupy Peyer's glands. We may add, as we have stated above, that these ulcerations are extremely rare in other chronic diseases, although inflammation of the mucous membrane of the intestine is not unfrequent.

"Besides, with the exception of the tuberculous granulations, the lesions, which have been noticed, are not peculiar to phthisis; they are observed, also, in other chronic diseases, but in different proportions. In 85 cases of this kind, 7 presented ulcerations, smaller than the large ulcerations of phthisis, and different in structure and form. Of these, 4 were cases of dysentery. Softening of the mucous membrane, with or without redness and thickening, took place in 1 case in 3; that is, in *less* proportion than in cases of phthisis.

"The *mesenteric* glands were found tuberculous in 23 cases out of 102 of phthisis; this affection being apparently uninfluenced, as to frequency or extent, by the duration of the disease.

"The glands nearest the cæcum were most frequently affected.

"The glands of the *mesocolon* are less frequently tuberculous than those of the mesentery; and I have not found grey semi-transparent granulations in either.

"I have found the *cervical* glands more or less tuberculous 8 times in 80 cases; and in 4 of these the mucous membrane of the trachea was perfectly healthy, a proof among a thousand, that inflammation of the membranes with which the lymphatic glands communicate, is not a necessary condition of their tubercular transformation.

"Besides this transformation, the *lymphatic* glands were more or less red and enlarged in a certain number of cases of phthisis and of other diseases; but in the latter they were free from tubercles.

"I have found the *liver* fatty in 40 cases of phthisis out of 120, while it has been so in 2 cases only out of 223 of acute and chronic diseases; so that the fatty liver is almost peculiar to phthisis.

"The fatty liver is more frequently found in women than in men, in the proportion of 4 to 1.

"The strength or weakness, and the age of the patient, and the more or less rapid course of the disease, seem to exert no influence upon this state of the liver. The liver may become fatty very rapidly, since I have observed it in cases of only 50 days duration.

"No symptom denotes this fatty state of the liver except its augmented size, a state scarcely ever observed in phthisis, except in this case.

"I have only found tubercles in the liver twice in 120 cases of phthisis, and never in other diseases.

"The *gall-bladder* presents no morbid appearance peculiar to phthisis. The proportion, however, of cases in which the bile contained in it is of a deep colour, thick, and, as it were, half fluid, is greater than in other diseases. This state of the bile existed in 1 case out of 3, of those cases in which the liver was fatty, and much more frequently than in other cases of phthisis.

"There was no relation between the condition of the bile and that of the stomach.

"The volume and consistency of the

spleen varied much, and nearly in equal proportions, in phthisis and in other diseases. One lesion of this organ only belongs to phthisis,—that is, tubercles, which I have found in 1 case in 14, or 7 times in 99 cases. These tubercles are much less frequently rounded in the *spleen* than in other organs, and much less frequently united with grey, semi-transparent granulations, a fact which I have observed only since 1825.

"The *kidneys* were found diseased in 1 case in 4; in the same proportion, indeed, as in other diseases. In 3 cases only were there tubercles, and in 1 a false membrane of a tuberculous character was attached along the ureters.

"In 40 cases, examined with care, the *prostate* contained tubercles in 3 cases, and in 1 of these tuberculous matter existed in the vesiculæ seminales and vasa deferentia.

"Most of the lesions of the *uterus* and *ovarium* observed in phthisis, are equally observed in other chronic diseases; one only is peculiar to phthisis,—tubercles, which formed a superficial layer upon the uterus in one case, and which were found in the ovarium in 2 others.

"The principal lesions of the *peritoneum* in phthisis are the effusion of a certain quantity of serum, or of pus, adhesion, and tubercles. I have found the first in 22 cases, or in 1 case in 5, nearly in the proportion in which it is found in other chronic diseases, excepting organic diseases of the heart. I have found pus in 4 cases of phthisis, whilst if we except organic affections of the uterus, I have only found such an effusion once in 80 cases of other diseases. In regard to tubercles, I have only found them in 4 cases, in which they also existed in the lungs, and in 1 of these this matter coexisted with a certain quantity of grey semi-transparent matter upon the omentum, which was from 12 to 15 lines in thickness.

"In 1 case only I have found universally diffused cellular adhesions in the abdomen of a phthisical patient; the peritoneum was healthy in other respects. I have not observed this lesion in any other chronic disease, a fact which proves the extreme rarity of acute diffused peritonitis. I have not observed such a case since the publication of my 'Researches on Phthisis,' except in the case of perforation of the intestine in the course of typhus fever.

"The lesions observed in the *brain* and its membranes are the same in phthisis and other chronic diseases. I have observed in phthisis, first, 2 cases of soft, false membrane on the surface of the arachnoid; secondly, an effusion of from 1 to 2 tablespoonfuls of serum in the occipital fossæ, in one half of the cases; and a larger quantity of the same liquid in the spinal canal, every time it was opened; a quantity of serum in the lateral ventricles proportionate to the duration of the "agonie," or state of sinking, an appearance which was absent, or nearly so, in the cases of sudden death; in 3 cases only I found a spoonful and a half of serum in the third ventricle.

"The *pia mater* was infiltrated in 3 cases out of 4.

"The *cerebral substance* was of a consistence greatly less than natural in 5 cases; in 1 the softening was confined to one of the hemispheres; in 6 this softening, to a degree almost amounting to a pulp, was confined to the fornix, or corpora striata. These lesions occur equally in other chronic diseases.

"The only lesion which I have found in the brain in phthisis only is tubercles.

"Thus, all the serous membranes,—the arachnoid, the pericardium, the pleura, the peritoneum, are, in many cases, the seat of effusion of greater or less extent. It is in the lateral ventricles of the brain that it is observed most frequently, in considerable quantity especially. The same membranes become the seat of acute inflammation in the last stage of the disease, but the pleura more frequently than the rest.

"The period at which the various lesions which have been described take place, is very variable. The pneumonia, the pleurisy, the redness and softening of the mucous membrane of the stomach, the pulpy softening of that of the colon, the peritonitis, the arachnitis, the partial and pulpy softening of the brain, occurred in the last stage of the disease. Most of the lesions were the results of inflammation, and denoted that the weakness of the patient was rather favourable than unfavourable to the development of this morbid action. The other lesions took place earlier in the disease, sometimes in its very commencement; such were the extensive ulcerations of the intestinal canal in some of the cases, &c.

"Some of the lesions were peculiar to phthisis, others independent of it, and common to various chronic diseases. Amongst the first were ulcerations of the larynx, and especially of the trachea and epiglottis,—the ulceration of the small and large intestine, especially of the former, the fatty state of the liver. The ulcerations, wherever seated, have some things in common. When the mucous membrane was destroyed, the submucous cellular tissue became thickened, and more or less uneven. After a certain time this ulcerates, and then the muscular coat first thickens and then ulcerates in its turn. In this manner it is rare to observe the destruction complete; for, as one membrane ulcerates, the other thickens, and thus resists the total destruction of the part, and postpones the fatal event.

"One lesion is peculiar to phthisis—tubercles, wherever they may be found. With one exception only, I have never found tubercles after the age of 15, in any viscus,

without finding them at the same time in the lungs, so that their existence in the lungs seems a necessary condition to their development elsewhere. Another fact seems to attest the same thing. With one single exception, I have always found the tubercles *more* developed in the lungs than in any other organ, whilst when they existed in several other organs, they were observed in them to be in the *same* stage of development. This last fact seems to prove the operation of a cause acting simultaneously upon many and distant parts, different in their structure, independently of the first exciting cause."

This is an extraordinary document, although it is one of extreme value, and exhibits the results of immense labour. There does not exist its parallel in medical literature.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS;
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE
BY
GEORGE G. SIGMOND, M.D.

MERCURY (continued.)—*The metal first used in the form of ointment. The Neapolitan disease. Practice of Berengarius Carpus. Mercurial fumigations. Mode of action of mercury. The crude metal sometimes salivates. Bad effects of mercury when improperly administered. Influence of the atmosphere. Examples of this. Dr. Bostock's experiments related. Methods of counteracting severe salivation. Means recommended by Lettsom, Pearson, Bateman, De Haen, and Wallace.*

GENTLEMEN:—There is little doubt, that when mercury was introduced into medical practice ointments and plasters were first made use of, and that its internal exhibition was subsequently recommended. To Jacobus Berengarius, commonly called Carpus, has been generally ascribed the first employment of mercurial ointment. Haller, however, says, "Non quidem inventor unguentorum mercurialium sed laudator." An ointment, composed of grease and mercury, was made use of by him very largely at the siege of Naples, which has been considered as the point from which the syphilitic diseases were disseminated over the whole of Europe. It is unnecessary for me to discuss the question as to the manner of the origin of this disease, although it is intimately blended with the history of the introduction of that remedy which was so long considered the only one adapted for its cure, and which has always been written upon by medical men in unison with it. Whether the infection was brought to Naples by the followers of Columbus from the West Indies, or whether it arose in Europe, is a question which still remains *sub judice*. Astruc, who inquired with greater zeal into the subject than any other investigator, has adduced a variety of authorities and arguments to prove that it was an importation from the New World. The rapidity with which the calamity spread over Europe, on the return of the French army from Naples, to which it had marched in a high state of health and of discipline, the concurrent testimony, that previous to that period there had been no such disease so prevalent as to have excited general attention, seem to justify the assertion, "that during the siege, the provisions growing scarce, the ladies of pleasure were turned out of the city, and then had no other resource than their enemies' generosity, who, according to their usual politeness, received them, and all their pestilential favours, with open arms." Amongst the medical officers attached to the army, and one in whom the officers placed the utmost reliance, was Berengarius Carpus, and he obtained the highest reputation for the cures he effected by means of the unguentum Neapolitanum. Dr. Mead, who paid considerable attention to the authors who wrote in his time, and who consulted the medical authorities now very difficult to procure, and was an admirer of the works of Montana, Fallopius, and Nicolaus Massa, tells us, that the prejudices and outcries against mercury arose from its effects as "unguents and emplasters;" and that the Arabians, having recommended mercurial ointments in lepra, "gave a handle to the Italian physicians to try their efficacy in removing the foulness of the skin from a new and terrible contagion; neither were they sparing of their liniments, which they continued to rub in for twelve, fifteen, nay, sometimes for thirty days together." The plan of treatment adopted by Berengarius Carpus, was to obtain, as speedily as possible, the admission of mercury into the system, by friction and by anointing the whole surface of the body. He generally succeeded in overcoming the disease in the strong persons who submitted to his discipline; but the weaker frames could not undergo it, and many were left in a state of great debility, and either fell victims to premature death, or were rendered feeble for the remainder of their existence.

For some time, therefore, mercurial inunction was abandoned, and a mercurial fumigation was substituted. This was effected by placing the patient naked near a large fire, into which was thrown a certain quantity of cinnabar, or sulphuret of mer-

cury; the vapour produced its effects upon the skin, but so many inconveniences attended this plan, and in many instances it was found so prejudicial to the lungs, that it likewise fell into disuse; but the mercurial ointment again found favour in the eyes of some of the faculty practising at Montpellier, at that time the fashionable resort of the sick and suffering. Didier and Chycoynau obtained there a very high reputation, by the employment of the mercurial unction, but in a much milder way than had been previously adopted. They placed, too, the patient before the fire, in order to assist absorption, and then directed that a small proportion of the ointment, now called mercurial, or blue ointment, should be diligently rubbed by the individual himself between the thighs: this process was repeated every evening until salivation was produced. Dr. Cantwell and Astruc, who had opportunities of witnessing the cures thus effected, travelled over various parts of the Continent, recommending what they called the "Montpellier treatment." It was by them introduced into England, and very speedily became the usual mode employed for the cure of the syphilitic diseases. Probably the opinion of John Hunter gave the external treatment a higher degree of character, fifty years ago, than it at present maintains. He says, "When it can be thrown into the constitution with propriety by the external method, it is preferable to the internal, because the skin is not nearly so essential to life as the stomach, and therefore is capable, in itself, of bearing much more than the stomach; it also affects the constitution much less. Many courses of mercury, which are absolutely necessary, would kill the patient if taken by the stomach, proving hurtful both to the stomach and to the intestines, even when given in any form, and joined with the greatest correctors; on the other hand, the way of life will often not allow it to be applied externally."

It has been thought that it is not the crude mercury which is absorbed, but that it is only the oxide formed during the trituration with the fatty matter, that produces any effect; and Mr. Donovan has, in the "Annals of Philosophy," expressed his opinion that the oxide is the only active ingredient. Indeed it has been denied that mercury, in its fluid state, can produce any effect whatever, excepting by its mechanical action. The death of Barton Booth, and of others, has been ascribed to the obstruction produced by quantity, and instances have been adduced where large portions have been swallowed with impunity. The Arabian physicians administered it in introsusceptio in very large doses. Fallopius and Brasavolus gave it in worms; and the former author states, that he has known women, anxious for a miscarriage, who swallowed whole pounds of it, without finding any mischievous consequence; and there is a story recorded of one of the Princes of the House of Brandenburg, who, on the first night of marriage, rising from the nuptial-couch to quench the thirst, occasioned by love and wine, drank a large quantity of fluid mercury, but suffered from his draught no harm. The College of Physicians, at Berlin, has given a report upon this subject, which tends to prove that crude quicksilver is not poisonous; but the authority of Dr. Mead must not be passed over. He says,—"Experience has convinced us that repeated doses of crude mercury have, in some cases, even a considerable time after they have been taken, exerted their full force, and thrown the body into unexpected disorders. I remember two accidents of this kind, and one of them proved fatal, in which, when a small quantity had been given for many days together, a violent salivation ensued more than two months after the use of it had been left off." He likewise tells us, that he saw a young lady who, having swallowed about six drachms every morning, three successive days, was salivated three weeks, "the flux then ceased, but returned after six months, and held a month, and once more came on, in the same manner, two months after; the breath was, at each time, strongly affected, as is usual in mercurial spittings."

There can be no doubt that quicksilver is rapidly absorbed, and that it is to be found in the fluids and in the solids, both during life and after death. I remember, on one occasion, it was stated at the *Westminster Medical Society*, that a lady who was undergoing a mercurial course by inunction was obliged to have a blister applied to the chest, and on making an aperture for the escape of the usual fluid a number of globules of quicksilver appeared. In the "German Ephemerides" is a very staggering assertion, that upon opening the vein of an individual undergoing a mercurial course some drachms of it flowed out with the blood. Zeller, who wrote a thesis detailing experiments made with mercury upon living animals, has given several instances of its appearance in the secretions; Schenkius met with a case where a spoonful was vomited up; Rhodius remarked an instance of its passing with the urine; and Hochstetter, with the perspiration. In "Corvisart's Journal" appears a case related by Dr. Jourdan, where fluid mercury was passed with the urine; Fourcroy speaks of an instance where a gilder had a number of pustules on the surface of the body, and each of them was found to contain a globule of mercury; after death Mead saw in the perineum of a subject taken from the gallows for dissection, whose rotten bones discovered what disease had required the use of it, and that I suppose by unction, a quantity of it without any marks of corrosion of the

part where it was collected." It is said that no less than a pound has been found in the brain, and two ounces in the skull-cap of a person who had been salivated. In the Lubben Cabinet of Midwifery there is preserved a pelvis infiltered with mercury, and taken from a young woman who had died of syphilis. Dr. Christison has collected many instances of this kind; amongst these is one supplied by Dr. Otto, who, on scraping the bones of a man who had laboured under syphilis, remarked minute globules issuing from the osseous substance; in some places globules were deposited between the bone and the periosteum, where the latter had been detached in the progress of putrefaction, and in other places; when the bones were struck a shower of fine globules fell from them. I believe many churchyards of former days will exhibit similar facts. It is not at all uncommon to find the skull-cap more particularly the seat of quicksilver, which insinuates its globules in a most extraordinary way into the texture of the bones. Experiments upon living animals have been tried, which prove the absorption of mercury into the system; those of Dr. Schubarth are the most satisfactory; amongst these a horse was, for twenty-nine days, anointed with mercurial ointment; eighty ounces were rubbed in. After fever, emaciation, diarrhœa, and salivation, he died. A quart of blood was taken from the jugular vein on the sixteenth day, another quart was procured from the great vessels after death; in each quantity of blood a liquor was obtained by destructive distillation, in which minute globules were visible; these were so very minute that they account for their having passed unobserved by Klaproth, Bergemann, Rhades, Meissner, and Schweigger, to whose observations I must refer you.

Mercury, improperly administered, is the source of very considerable mischief; at the same time we must weigh well the different statements that have been made by various authors of the effects which it has produced; for, as Dr. Christison has very justly observed, if credit were given to all that has been written, and is still maintained on this subject, almost every disease in the nosology might be enumerated among its secondary and chronic effects, for there is hardly a disease of common occurrence which has not been imputed by one author or another to the direct or indirect operation of mercury. The administration of such doses as do not affect the bowels may be persevered in for some time without affecting the constitution, more particularly when in the form of the blue pill; and although inunction is frequently beneficial, more especially in correcting the biliary secretion, it is very apt to derange the digestive organs if they are at all irritable. It is always of very considerable importance to pay attention to the state of the weather, both as to the prevalence of disease and as to the proper period at which remedies are to be administered. The older physicians laid particular stress upon the influence of the sun and moon upon human bodies; and Dr. Mead has collected some very curious instances to prove the influence of the planets. Modern science and experience have shown that although the paroxysms and periods of disease are guided by regular laws, there is no reason for the belief that the celestial bodies are in any way connected with them, but that they are dependent on atmospheric changes, we find, under particular aerial states, that epidemics are prevalent, and that their cure must vary according to the changes that produced them, and medicines will, under such circumstances, lose much of their power, and even be productive of evil consequences. During fine clear weather the preparations of mercury seldom affect the bowels, nor do they produce that depression of spirits which is so often observed to accompany their use during damp moist weather. This does not altogether depend upon the state of atmosphere determining from the outward surface, and preventing a free action of the skin, because the coldest weather, if it be dry, is well adapted for its administration. It seems, in some measure, to be connected with the electricity of the body. We are well aware if the weather be damp and foggy that a listless and languid state is produced, whilst during dry weather, however cold it may be, there is a feeling of light-heartedness and cheerfulness pervading the whole of the system. In the first instance the atmosphere is robbing us of our electricity, which it greedily absorbs; in the latter case the dryness of the air is such that it leaves us in possession of the electricity which seems to belong to us; hence the buoyancy of spirits on the cold frosty days of December and January, and the suicidal despondency of November; and hence the elasticity, the life and animation of the Frenchman, the sluggish, heavy movement of the Dutchman, the variable feelings of the Englishman, one day full of hope and cheerfulness, the next day at war with himself and the rest of mankind.

During moist states of the weather mercurial preparations should be sparingly prescribed; and when, from the diseased state of the system, they cannot be dispensed with, very great attention is to be paid to the clothing. To every one in damp, moist conditions of the atmosphere, flannel is a great comfort, but silk is the most useful covering to the body. It is by far the best friend and comforter that can be applied. We know that if a silk handkerchief be perfectly dry, that lightning the most accumulated could not pass through it, so decided a non-conductor is it; hence, if worn next to the skin, the air cannot absorb the

electricity of the human body. Silk waistcoats, drawers, and stockings of the same material, are of the greatest service during the humid state of the winter months of this country. The hypochondriac, the nervous, will derive from them more benefit than from the most active tonic, and they will prove a more invigorating cordial than any spirituous dram; nor are the effects transient, for a buoyancy of spirits, and an agreeable warmth, are thus diffused over the whole frame. Patients, therefore, during mercurial influence are much better wrapped in silk than even when confined to bed; but this latter precaution can more generally be taken, and hence the different preparations are always best administered on the invalid retiring to bed, and he should be kept there until the effects have been produced; this is more especially the case with calomel. As much mischief has arisen from the want of proper precaution, as from large doses, and the habit of the individual is always to be duly weighed and considered. Females of a delicate, nervous, irritable frame, are rendered languid, peevish, incapable of fulfilling their usual duties; they feel chilly, they easily shed tears, are sometimes almost hysteric; and though they have no actual suffering to endure, are almost as miserable as if they had it to encounter. On the other hand, the stout, robust, plethoric individual, who probably has to bear very great pain, from the nature of his disease, seems quite insensible to any unwonted effect; it, however, more generally acts upon such a constitution with greater energy, and leaves behind it a more decided state of debility, if it be persevered in for any length of time, or if it be often repeated. The inhabitants of this country are very little influenced by it, comparatively speaking, from their high mode of living, and from their being so much habituated to the changes of climate; but the foreigner is not so fortunate, nor can he bear a dose which, in his native air, he could take with impunity. Indeed, they have a horror of blue pill and of calomel; and I certainly have witnessed their greater incapability of bearing it here than in their own climate. I have had opportunities of comparing these points,—I have seen the practice on the Continent, and I held the station of physician to the King's Theatre, under the administration of Mr. Ebers, for three or four years, and I was uniformly struck with the singular change that climate and habits of life produced upon the effects and operation of medicine. Those who could bear well full doses under ordinary circumstances, could not submit to much smaller ones here, nor could they bear, in any shape or form, the administration of mercury.

The annals of practice in India likewise show that doses of mercurial preparations are very much influenced by a dry climate. Some very highly intelligent men there have prescribed quantities, and their repetitions which, in our moist and uncertain atmosphere, would very quickly injure the constitution, and leave it in a state to be acted upon by every morbid exciting cause that might present itself. Whether all this is to be attributed to electric states of individuals, or of the atmosphere, remains to be explained. Some of the phenomena which are observed demand further inquiry; nor do I know that they have undergone much investigation. There seems to be a peculiar state of constitution in which the electric spark is developed, and elicited from an individual, and this when he is in a state of high susceptibility, from the action of any internal or external agent. Nervous individuals exhibit luminous sparks from the hair when it is combed, which are not visible when they are in health, and this is an indication of cerebral excitement. I once witnessed this in company with a physician, in a highly intellectual lady, labouring under great nervousness; electric sparks, of the most vivid lustre, were elicited by combing, but they disappeared when health was restored.

Dr. Pitcairne's case of the effect of atmosphere is, perhaps, the most remarkable we have on record, both in regard to the disease and its concomitant circumstances. Being at a country seat near Edinburgh, in February, on a fairer day than usual at that season, and the sun looking reddish, he was seized at nine in the morning, the very hour of the new moon, with a sudden bleeding at the nose, after an uncommon faintness; and the next day, on his return to town, he found that the barometer was lower at that very hour than either he or his friend, Dr. Gregory, who kept the journal of the weather, had ever observed it, and that another friend of his, Mr. Cockburn, professor of philosophy, had died suddenly at the same hour, by an effusion of blood from the lungs, and also five or six others of his patients were seized with different hæmorrhages. Such instances are of importance, and should be inquired into, with a view of throwing some light on subjects which ought not to escape the most anxious investigation.

One of the ill effects of mercury is the production of salivation, or, as it has likewise been termed, ptyalism; this is one of the proofs of the action of the metal upon the system, and has been produced by very small quantities, very rapidly. Various are the theories which have been brought forward to account for this determination to the salivary glands; but it would be useless for me to attempt any explanation, for none of those that have been advanced are perfectly satisfactory. There seems, in some constitutions, a peculiar idiosyncracy, which is exhibited by the incapability of taking a very minute quantity of this mineral with-

out this effect being very rapidly produced. Five grains of blue pill, taken for three successive nights, have been known to produce salivation; and Dr. Ramsbotham, in the "Medical Gazette," states, that death occurred after such a small quantity. I think that in many instances, where such results have arisen, that the blue pill must have been adulterated, or that the confection of roses must have contained a larger quantity of acid, and that the resulting decomposition must have caused the formation of a destructive salt.

Dr. Crampton has, in the "Transactions of the Royal College of Physicians," narrated a case in which calomel in so small a quantity as two grains, excited salivation; this was followed by extensive ulceration of the throat, exfoliation of the lower jaw, and death.

There are numerous substances, both in the vegetable and mineral kingdom, which will produce very considerable salivation, though of a different character from that which is attendant upon the use of this metal. Amongst the minerals the salts of gold, of antimony, and of copper, are the most remarkable. Croton-oil, digitalis amongst the vegetables; the imagination, too, has great influence. In the "Medico-Chirurgical Review," we are told that a very salutary salivation has been produced by bread-pills in a very hypochondriac patient, who fancied he had syphilis, and that he ought to be put under the influence of mercury, and particular injunctions were given him to leave them off as soon as the mouth became affected. Sauvages speaks of twenty species of salivation, enumerating that which attends upon small-pox, occasionally upon gout, upon pregnancy, and even upon syphilis, where no mercury has been administered. Cases of salivation in all these states are to be found in our periodicals. In the twenty-sixth volume of the "Medical and Surgical Journal," will be read an instance of a lady who, for a fortnight, daily excreted two or three pints of viscid fluid. Two physicians were called in, during different periods of the affection, they were equally unsuccessful in putting a stop to the salivation. Great care was taken to ascertain if any empirical remedy had been used, but there was not any ground to believe that mercury had in any shape been taken. The diseased state yielded spontaneously after all remedies had been given up. It has accompanied cynanche, paralysis, fever, bronchitis; but there is a very striking difference in the symptoms that appear at the same time. There is no fœtor of the breath, no brassy taste, no sponginess of the gums.

Dr. Bostock has, in the "Medico-Chirurgical Transactions," stated some experiments that he made upon the saliva during mercurialisation. He had some years before analysed the fluid in its ordinary state. The deductions to be drawn from his labours are, that the chemical constitution of the mercurial is, in many points, different from the common saliva, and this consists in the presence of a quantity of animal matter, possessing properties which resemble those of albumen in its uncoagulated state, or as it is found in the serum of the blood. The change would appear, he says, to consist essentially in the conversion of the animal matter from the state of a mucous to that of a serous or, rather, an albuminous fluid. Dr. Bostock made his examination of the saliva when the system was fully under the influence of the mercury, when about two quarts a day were excreted, but there was no appreciable trace of mercury in the fluid: the analysis leads him to a physiological inquiry into the action of this remedy, for which I must refer you to the paper in question. When the system begins to evince that it is under the control of the medicine, various symptoms are exhibited; sometimes they are of a mild nature, at others they are very violent; the mouth sometimes first displays the constitutional affection, but it is most generally preceded by some degree of acceleration of the pulse, a degree of feverish excitement, and various nervous affections. If the ptyalism be suddenly established without much previous admonition, the excitability of the system is very commonly much greater, and general constitutional disorder is evinced, and the soreness of the mouth causes an irritability of the whole frame; considerable absorption of the fatty matter, attended by a great extenuation of the body is quickly visible, and the stoutest person generally becomes thin and emaciated; the excretions from the various organs are altered in appearance and, oftentimes, in odour; the alvine evacuations become of a brighter yellow, the urine is higher coloured; a peculiar state of skin, evinced by a very singular fœtor, which is quite diagnostic of the mercurialisation, and of which it is impossible to convey any impression by language. It materially differs from the smell that issues from the body after sweating has been produced by Dover's powder, or that which occurs during some eruptive fevers, or upon mental derangement; it is a peculiar characteristic which occasionally lasts after ptyalism ceases. When the action is very severe upon the mouth, the misery which taking any food produces is enough to prevent the indulgence of the appetite, which is sometimes not at all diminished; but when the ptyalism has completely ceased, the appetite is of the most ravenous character, which nothing appears to satisfy; then nutrition recommences, the deposition of the well-digested secretions in the various parts of the body, which have lately lost their usual quantity of fatty matter, is very rapid, and the frame speedily acquires even

a greater bulk than it previously had, and oftentimes the standard of health is more firmly fixed than it was before, but this is not always the case; some individuals are left in a state of great feebleness, and liable to every shock that would, under ordinary circumstances, be light. Sometimes local disease has lasted for some time, and even run to a very outrageous extent; ulcerations of the tongue, exfoliations of the alveolar process. Various are the means by which the ill effects of the metal have been attempted to be counteracted. Sulphur has acquired considerable celebrity, and has been said to diminish its action. Dr. Lettsom says, he generally found it sufficient, with the addition of bark, to strengthen the general system. Dr. Bateman gave it freely with chalybeates. Pearson thinks free exposure to the air quite sufficient. De Haen ascribes great power to electricity, and mentions its effect on one patient who had a dreadful "tremblement," so that he could work no more; he could neither eat nor drink without assistance, nor render himself intelligible, and, like an infant, was obliged to be assisted for the discharge of the natural secretions. Various means have been adopted to check the salivation when profuse; opium and the narcotics, gargles of tar, superacetate of lead, which, however, blackens the teeth, has been employed as a local remedy. Dr. Wallace, in his valuable lectures, recommends the nitrate of silver pointed to be applied to the ulcerated edges of the gums, from which the greatest comfort is derived by the patient.

PHRENOLOGICAL SOCIETY OF LONDON,

75, Newman-street.

THE first meeting of the *Phrenological Society* was held on Monday evening, Nov. 6th, the PRESIDENT in the chair, when the following paper was read:—

ON THE

IGNORANCE

OF THE

DISCOVERIES OF GALL,

EVINCED BY

RECENT PHYSIOLOGICAL WRITERS.

By JOHN ELLIOTSON, M.D.

Every phrenologist will agree with me that he never met a disbeliever in phrenology who showed the least acquaintance with the science and the endless and diversified facts upon which it is founded. The absurdity of the objections to which we are compelled to listen, is not less wearisome than the ignorance of the facts amassed by Gall, and surrounding us on every side, is disgusting. Having adopted certain opinions upon the mind and brain, without any examination, they reject phrenology, justifying Locke's accusation, that few people have any solid reason for the "doctrines they keep such a stir about." ("Human Understanding," iv. 21). Not a single objection to the principles of phrenology is ever adduced that was not urged in the time of Gall, and amply refuted by him. But, then, none of these objectors have studied Gall. I have met with many disbelievers who had read Dr. Spurzheim and Mr. Combe, and been unconvinced; but how any one, who has studied Gall, and examined for himself into the facts of the coincidence of development and character, can doubt the truth of phrenology, I cannot imagine. Indeed, I am satisfied that it is impossible. The greatest misfortune that has ever befallen phrenology has been the want of an English translation of Gall's works; the consequence has been, that nearly every one in Great Britain and Ireland, who has bestowed a thought upon phrenology, have contented themselves with learning it second-hand, from Dr. Spurzheim, or third-hand, from Mr. Combe. In these works some find things of so questionable a character, that I have known many confess that they had closed the books in disgust, and so never proceeded to examine the evidences of organology; and the facts of organology displayed in the works of these two writers, not being comparable to the splendid array in the volumes of Gall, converts have been made in far smaller numbers than if Gall's works had been studied. As to those organs, the discovery of which Dr. Spurzheim claims as his own, scarcely a fact is adduced in their support, and little more than bare assertion is made. An English translation of Gall has recently been made in America, but I am happy to say that our Secretary is preparing one in which the splendid section on amativeness will be translated, like the rest, into English, and not left in French, and in which those parts of the large work which are not to be found in the octavo edition, will be inserted, many of which are very fine. Gall's works are clear, flowing, full, at once rigidly philosophical, and rich with profound thoughts and glowing illustrations. I never take them up without finding something fresh, and feeling that I am with one of that band of mighty minds to which Bacon, Shakspeare, Milton, &c., belonged. They speak for themselves, and are totally different from the writings of Dr. Spurzheim; and yet Gall's writings are unknown to the greater part of the physiologists of the present day. This assertion may startle, but it is true. The *British Association of Science*, assembled at Cambridge, in June, 1833, published a report, by Dr. William Charles Henry, on the "Present State of our Knowledge of the

Nervous System," in which not only was phrenology entirely passed over, but the following declaration was made:—"That the brain is the material organ of all intellectual states and operations is proved by observation on comparative development, as well as by experiments on living animals, and by the study of human pathology; but there does not exist any conclusive evidence for referring separate faculties or moral affections to distinct portions of the brain." Nothing was advanced in support of this strange assertion, the name of neither Gall, nor any other phrenologist, was mentioned, and the inevitable conclusion is, that neither the writer, nor those who ordered his report to be printed, could have ever opened Gall. The arguments and facts displayed by him must have attracted at least a passing notice, had they been known. I defy the Association to pass over Gall's writings in silence on another such occasion, if they condescend to open his volumes. In one of his beautiful passages he says—"All the doctrine is now consecrated to the public; judgment cannot long remain doubtful, personal feeling will disappear, the passions will calm, and criticism will have only its due weight; posterity will not fail to contrast the point from which I started, with that at which I stopped. My adversaries have but too distinctly displayed the state in which the objects of my labours were, for it to be difficult to know what improvement these have derived, and will derive from my discoveries." If the errors and ignorance displayed by Gall's adversaries, during his career, served clearly to mark the accession of knowledge for which the world is indebted to him, the total ignorance of phrenological facts, set down in legible characters for the gaze of posterity, in the report of the *British Association*, will serve to establish to future ages, when phrenology shall be, as it will be, universally received, that for the whole of the first and only true doctrine of the mind, and its various faculties, we are indebted to Gall alone.

The first great principle is, that the brain is the organ of the mind. Although no rational being now doubts this, and it is admitted by the *British Association*, it was denied by a large number of writers, and by an immense number of persons at the time Gall wrote. Hippocrates and many able writers acknowledged the brain to be the organ of the mind, but Gall had a host of adversaries when he maintained this opinion. On account of it he was called a deist, an atheist, a materialist, and other opprobrious names, which, from being so lavishly bestowed on men of sense by those who differ from them in opinion, serve at present only to excite laughter with those who love truth and good actions.

The second principle of Gall was, that distinct parts of the brain had distinct offices; that each primitive faculty was possessed by a particular part of the nervous system. This principle was maintained many ages ago, with regard to the powers of sense and motion. Erasistratus, from the fact of paralytic limbs being sometimes deprived of sensation only, sometimes of motion only, or even, in the latter case, becoming more sensible than previously,—supposed that there must be distinct nerves for sensation and motion. Galen taught his contemporaries that one set of nerves went to the skin for sensation, and another to the muscles for motion. Sir Charles Bell found that in dividing the posterior spinal nerves no motion ensued, but that, on touching the anterior, the muscles of the back were immediately convulsed. He concluded that the anterior only were for motion. He thought, however, that they might be also for sensation, and that the posterior might have other functions altogether, since he found that the division of the posterior nerves did not impair motion at all, and, he adds, that the pain attendant upon the experiment prevented him from judging how far sensibility remained after the division of the posterior nerves. It was M. Magendie who proved that the division of the posterior nerves deprived the corresponding parts of the animal of sensibility, and that the division of the anterior deprived them of motion only. Sir Charles Bell, therefore, made but a portion of the discovery. M. Magendie cleared up what he had left in doubt. But, after all, the discovery was merely the proof of an opinion entertained for ages, down to the most modern times; and there was no new principle in it, since it was an established fact that certain nerves, such as the olfactory, acoustic, and optic, are for sensation only, and others, as the common motor, the external motor, and the internal motor, of the eye, and the lingual, are for motion only. Again, this was but a single instance in regard to individual nerves, of Gall's great general principle, that distinct offices are performed by distinct parts of the nervous system. Yet Dr. William Charles Henry ventured to state, before the assembled Association, not only that the honour of the discovery belonged exclusively to Sir Charles Bell, but that it is "doubtless the most important accession to physiological knowledge since the time of Harvey:" an accession of knowledge which is simply an individual example of Gall's great general principle in the nerves.

At the last meeting of the Association, at Liverpool, it appears that Mr. Carlisle, of Dublin, presented the cerebellum of a female of weak intellect, which lay completely below the cerebrum, and was not larger than an ordinary walnut. The case was reported in THE LANCET to be very interesting in a phrenological point of view, inasmuch as the organs of reproduction were remarkably well developed. The uterus

and fallopian tubes were very large. The second example was that of deficiency of one half the cerebellum, while the other half was comparatively small. The subject of this case was known to have possessed strong animal passions. In commenting upon these two cases, Mr. Carlisle pointed out the little relation which exists between the size of an organ and the function depending upon it, and endeavoured to show that his cases were subversive of Gall's doctrine. Now, as to the first case, Gall takes pains to show, at great length, that there is no relation between sexual desire and the size of the organs of generation: that persons with a small cerebellum and moderate desire, may have large organs of generation; and, on the other hand, persons with a large cerebellum and strong sexual desires, may have small organs of generation; that there is no relation between the two. This case, therefore, was not subversive of Gall's doctrine. As to the second, in which one half of the cerebellum was absent, and the other comparatively small, we require to be informed with what it was comparatively small; whether comparatively with the ordinary size of the cerebellum, or comparatively with the rest of the brain;* and whether, again, it was in a healthy state, or showed signs of a very active circulation. As to the deficiency of one half of the organ, Gall distinctly points out that one hemisphere of the brain may be destroyed, the other remaining healthy and performing all the operations proper to both.

Dr. Graves, in the "Dublin Journal," for last July, heads an article as "A Fact for the Phrenologists," and he begins it thus—"I do not know whether the following fact, taken from one of the February numbers of the 'Boston Medical Journal,' may tend to deprive the cerebellum of some portion of its phrenological importance, neither can I guess whether the occurrence of priapism in this case, where the injury affected the spinal chord so far below the brain, may force the cultivators of phrenological science to locate at least some of their organs in extra-cranial situations. At present the various organs that administer to our intellects, propensities, and passions, are so crowded within the skull, and are so rapidly increasing in number from year to year, that some plan must be speedily adopted to relieve the pressure from within. To avert the evil consequences of having the organs too closely packed, it may be prudent to transplant some to other parts of the nervous system; happily, Nature encourages our plan, and affords abundant proofs that the most inconveniently capacious of these organs, and that which predominates over its fellows so as almost to monopolize the cerebellum, may be transferred, without loss of vigour, to the spinal marrow; the propensity which Gall and his followers have laboured to insulate and confine within the cerebellum, may, indeed, be proved not only by the fact I am about to cite, but by numerous cases brought every day before practical surgeons." He then copies a case of a man who fell from a cart with his shoulders and back of the neck upon the ground; the cart capsizing struck him on the hip, doubled him over, and left part of the load of slabs resting on him; he lost all power of sensation and motion below the middle of the breast; priapism took place, but he possessed his reason perfectly; he died in three hours. Externally was a large contusion at the back of his neck at the top of the shoulders. On cutting down to the spine at this point a large quantity of extravasated blood flowed from the spinal canal, and parts about the wound; and the spinous and transverse processes of the sixth cervical vertebræ were separated from the body of the bone, and broken into several pieces. The body of the vertebra was dislocated forward so far as to crush the spinal marrow over the posterior edge of the body of the vertebræ below. It is remembered that the patient referred to his back, some inches below the injury, as the seat of all his sufferings. Now, what are the facts of this detail? That no mention is made of the state of the cerebellum; that a severe injury was inflicted at the back of the neck, that is to say, in the neighbourhood of the cerebellum; that he had fallen with the back of his neck upon the ground; that the front of the head not being injured his intellects were unimpaired, but that priapism took place. If the cerebellum had been examined and found uninjured, this would have proved nothing against phrenology, because nervous fibres run from the cerebellum to the portion of the spinal chord whence the spermatic nerves go off, to convey the effect of desire from the cerebellum to the organs of generation.

In the third volume of his large work, printed in 1818, and some years before this, in his lectures, Gall declared, from numerous observations, that the nervous fibres from the organs of generation ascend from the genital parts, till they reach the cerebellum, where they decussate exactly like the anterior pyramids. MM. Serres and Fleurens made the same discovery some years afterwards, and contended for priority between each other, not mentioning Gall's name. Now, if a nerve is irritated in any part of its course the parts in which it terminates are likely to experience irritation; the injury at the

* A member stated that he was present when Mr. Carlisle brought forward his cases, that Mr. Carlisle did not produce the cerebellum, but only what was said to be a drawing of it, and that the half appeared to be of the ordinary size.

back of the neck, though it had spared the cerebellum entirely, was fully capable of exciting the organs of generation to priapism. The true friends of Dr. Graves must regret that he has added these to the many former silly remarks which he has made upon phrenology.

My excellent friend, Dr. Bostock, in the edition of his "Physiology," which has just appeared, shows himself very unacquainted with phrenological writings. In his chapter upon the "Hypothesis of Cranioscopy," as he calls it, he begins by stating that the connection of character and disposition with the peculiar shape and organisation of the brain was first placed in a phrenological point of view by Drs. Gall and Spurzheim, who, in consequence of their accurate dissection of the brain, and their mode of separating its different parts from each other, were led to conjecture that these parts were appropriated to distinct mental faculties." Now, Gall had lectured and written upon his discoveries long before Dr. Spurzheim knew anything of them, and Gall had established great part of his doctrine before he began to dissect the brain at all. Dr. B. then says "it is by an appeal to experience that the supporters of cranioscopy, and Dr. Spurzheim in particular, attempt to establish their opinion, and they have accordingly brought forward a number of facts of this description, which are supposed to form a sufficiently firm basis for their system." Now, so far from Dr. Spurzheim in particular, producing facts, it is Gall's works which teem with them; indeed, they are a series of inductions of facts innumerable. It was Gall's facts which made Dr. Spurzheim a phrenologist. Dr. Bostock says, "the position that the size of an organ is an indication of the degree of its power or capacity, a position which may be regarded as almost the fundamental principle on which the whole doctrine rests, is in direct contradiction to fact." Now, if Dr. Bostock had studied phrenology, he would have known that Gall, and after him Dr. Spurzheim, Mr. Combe, and every phrenologist disclaims such doctrine. It is not size, but size and quality, upon which strength of faculty depends. Gall knew and says that an organ may be very large, and the faculty weak; that a brain may be very large, and the person imbecile and passionless; that the same organ may display great power at one time and little at another. At p. 57 of his sixth octavo volume, Gall says "imbecility is not only the result of a defective development, the functions of the brain may be impeded by other indispositions; idiotism is frequently met with even from birth when the organisation is apparently perfect." Dr. B. says that for the full establishment and clear demonstration of the decussation of the fibres of the anterior pyramids we may consider ourselves as indebted to Gall and Spurzheim. It was known of old, as Gall remarks, in his demonstration of it, and cannot be disputed; but Gall established it, in opposition to Prochaska, Barthez, Sabatier, Boyer, Dumas, Bichat, Chaussier, Magendie, and Desmoulins, and taught it before Spurzheim was his pupil; and though, in his "Anatomy of the Brain," p. 148, Dr. S. says, "Modern anatomists, before Gall and myself, were divided in opinion on the subject of the decussation," at p. 11 he confesses that, having completed his studies, he was associated with Gall in 1804, "and at this period Dr. Gall, in the 'Anatomy' spoke of the decussation of the pyramidal bodies." Dr. B. states that "Sir Everard Home anticipated Drs. Gall and Spurzheim in what has been supposed the most novel of their doctrines;" viz., that the convolutions of the brain are unfolded in hydrocephalus. This Sir Everard Home published in the "Philosophical Transactions" for 1814; but Dr. Gall had already published this in his "Anatomy" several years before. It will be found in the first volume of his large work printed in 1810, and he had stated it previously in his account presented to the Institute in 1808, and before that in his lectures. This Dr. Spurzheim shows at page 53 of his "Phrenology." In one part of Dr. Bostock's "Physiology" we read that "The conjecture of Sir Everard Home is not without plausibility, that the fluid which the ventricles contain, varying in its quantity, may serve to equalise internal pressure." This conjecture was published in the same volume of the 'Philosophical Transactions,' for 1814. Now, Dr. Spurzheim distinctly says at p. 46 of his "Phrenology," "before Sir Everard Home, Ackerman in Heidelberg, published the same statements."

I should weary the Society were I to lay before them other recent instances of this lamentable unacquaintance with the labours of phrenologists; but these examples of ignorance of mere phrenological principles and history, will show how little weight can be attached to the opinions of antiphrenologists on the endless evidences of the science.

CLINICAL LECTURES AND REMARKS ON DISEASES OF THE SKIN, VENEREAL DISEASES, AND *SURGICAL CASES*,

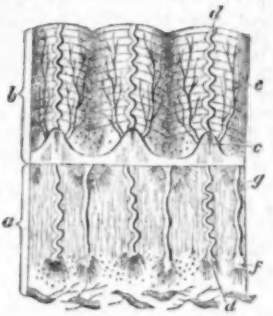
DELIVERED AT THE SKIN INFIRMARY, AND AT THE JERVIS-STREET HOSPITAL, DUBLIN.

By Wm. WALLACE, M.D., M.R.I.A.,
Honorary Fellow of the Medical Society of New York;
SURGEON TO THE ABOVE INSTITUTIONS.

THE STRUCTURE OF THE NEGRO'S SKIN, AS UNFOLDED BY THE ACTION OF BLISTERS.

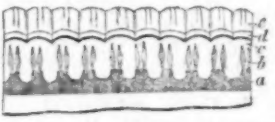
Remarks on the Treatises of Gaultier and Breschet on the structure of the skin. Their incompatible representations. Object of this lecture. Effects of inflammation on the colour of the negro's skin. Practical consequences. Cases in point. Vesication in the negro. Colour of the blcb. Seat of the effused serum. Appearance of the denuded rete; its degree of adhesion to the cutis; mode of destroying this adhesion. The epidermoid glands; their situation, number, arrangement, structure, and function; their importance in disease; the degree of attention which they have obtained; the mistakes respecting them by anatomists and pathologists. Opinions of Bidloo, Chevalier, Breschet, Gaultier, and Eichorn. The relation of the epidermoid glands to the capilluli.

Gentlemen:—Here is a publication on the structure of the skin. It is the result of the combined labours of two French anatomists, Breschet and Roussel de Vauzème. It has attracted, during the last two years, a considerable share of attention, as well in England as on the Continent. There is another modern treatise on the same subject, published a few years ago, by Gaultier, also a Frenchman; and it, as well as its predecessor, excites much notice. Both treatises are founded principally on microscopical observation. Now, as I do not pretend to be a great adept in the use of the microscope, I shall not assume the liberty of contradicting the assertions of these gentlemen, merely because I have not been able to observe, after a good deal of trouble, that which they say they have observed; but, I will take upon me to assert, that which all must admit, who will give themselves the trouble of examining the delineations which these authors have published of the structure of the skin, that both publications cannot represent facts. In truth, if the skin possesses that structure in the microscope, which is delineated by Gaultier, it cannot have that represented by Breschet, and *vice versâ*. They cannot be both right. Judge for yourselves. Here are the figures given by these authors to represent the appearance, or internal structure, of the cut edge of a piece of skin. This figure



is from the work of Breschet. He affirms that the cutaneous organ is composed of two layers; *a*, the derma, and *b*, the epidermis, and that these are lodged, or ramified, as it were in these layers; *c*, an "appareil néurothile," or "corps papillaires," that is, the organ of touch; *d*, an "appareil diapnogène," or organ which secretes the sweat, and excretes it by a spiral duct; *e*, an "appareil d'inhalation," or absorbing canals; *f*, an "appareil Blennogène," with *g*, an "appareil chromatogène," or the organs by which the epidermoid tissues are formed.

On the other hand, Gaultier describes the skin as formed of five layers. Cloquet has given us this figure,



from Gaultier's work. *a*, represents "la derme" *b*, "les bourgeons sanguines;" *c*, "couche albide profonde;" *d*, "les gemules," and *e*, "couche albide superficiale."

I believe, Gentlemen, it will be, as I have said, impossible to reconcile the labours of these authors, and the observations of the one are, in my opinion, as much entitled to credence as those of the other. Indeed it is easier, perhaps, to reconcile what we have seen in Nature with the statements of Gaultier, the oldest of these authors, than with those more recently made by Breschet and Rousel de Vauzème. However, I shall not say that either is right, or that both are wrong; nor do I wish you to suppose, from what I have said, that I despise anatomical observations made with the microscope.

On the contrary, I admit that considerable advantage has been obtained, on some occasions, from this mode of investigation; but I would advise you to receive all microscopical representations with the greatest caution; and I would recommend you not to call on the assistance of this instrument in anatomical investigations, until after the utmost use had been made of the naked eye, and of moderately magnifying powers.

Whether the complex structure described by these authors, will be found in the skin, I repeat, I shall not pretend to say, but I am certain that their labours have not assisted much, if at all, to advance our pathology, and this is not only the great object of anatomy, but often the best test of anatomical facts.

Now, although I have fully explained, in my lectures introductory to diseases of the skin, the peculiar opinions which I have been led to form of the structure of the integuments, I think it will be useful to recall to your memory, and to repeat in a connected manner, some desultory clinical observations bearing upon, or illustrating, this subject, which I have had occasion to make from time to time, in the course of the last few days, upon the skin of Nicholls, the negro, from St. Domingo; or, in other words, I wish to test with the facts you have lately witnessed, some opinions of mine, which are opposed to those of our continental brethren; and, in the first place, with the assistance of these drawings which I have had made, let me recall to your memory the appearances which you observed to result in this negro's skin from the application of blisters, and the remarks which I made to you, from day to day, upon this interesting subject.

You know that, in general, a few hours after a blister has been applied to the skin of an European the redness of the part on which it is placed is increased, inflammation being produced. Are the immediate

Effects of a Blister applied to the Skin of a Negro

similar? Here is a drawing

of a piece of Nicholls's skin, with which a blister had lain in contact for two hours, and you saw, as the drawing represents, that the part acted on, became more intensely black. You also found that its temperature was increased, and that it was rendered tumid, and more sensitive; but there was no redness produced. In fact, when a negro's skin is, by a blister, or any other cause, affected by inflammation, it does not become red. The black colour not only continues, but its intensity is, as I have said, increased. This increased intensity of colour must depend on an altered vital action of the cutaneous surface, as an increase of redness of the surface in the European, depends on a similar cause. If you feed a negro well, and thus increase his energy, you will make him darker in colour, and if you improve in a similar manner the health and vigour of an European you will render his complexion of a more clear red.

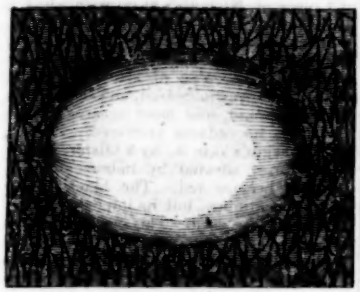
The fact, that inflammation of a negro's skin does not produce redness, requires to be borne in recollection. It is of practical importance. You had a proof of this in the case of the negro of whom we are now speaking. When admitted he had diffused inflammation, or erysipelas, of his left leg and thigh, but the limb was only hot, swelled, and painful; and, if we had formed our judgment respecting the existence or non-existence of inflammation from the colour of the part, we should have been deceived. Indeed, the case excited, from this very cause, some surprise, when the negro first presented himself. You remember he appeared very lame; he could scarcely touch the ground with his foot; the whole limb was greatly swelled, but from the absence of redness its enlargement gave more the idea of indolent œdema than of inflammation, and the poor fellow excited among you the suspicion that much of the suffering depicted in his countenance was feigned. This delusion was, however, immediately dissipated, upon feeling the intense heat of the limb, and observing the sensibility evinced by his involuntarily shrinking under the slightest touch. His tongue was also loaded and white, and becoming dry and brown; and his pulse was rapid.

Not long ago we had another negro patient, who laboured under a lichenoid venereal eruption, and it was diagnosed with difficulty, in consequence of the absence of preternatural redness in the eruptive spots. They were distinguishable only by their elevation.

Such, then, are the immediate consequences of a blister applied in the black; but when the same is allowed to remain on for several hours what results? Is

Vesication produced in the Negro,

as in the white races? Oh yes; and you had occasion to remark, as this drawing



represents, that however black the surface to which the blister was applied, may have been, the colour of the bulla, or bleb, is nearly as free from a black tinge as the bulla which occurs from a blister in the European. You also see that the surface of the raised cuticle is no longer marked by the grooves observed before the blister was applied; nor does it transmit any capilluli. How is all this to be explained? The situation of the effusion which forms the bleb accounts for the pale colour. Do you ask what is this situation? Remember what you have several times had occasion to observe, or, at least, what was often pointed out to you, and you will be able to answer this question. You must have remarked, that when the membrane which formed the bulla, and along with it the contained fluid, was removed, an intensely black surface was exposed, that is, the surface of what is called the rete mucosum was exposed. This surface lay under the effused fluid, consequently the liquid which forms the bleb in such cases, is interposed between the cuticle and the rete. The latter membrane continues adherent to the cutis, while the former is raised by the effused serum, and produces, as I have said, a bleb nearly as pale in colour as the bleb from a blister in a European. I say nearly as pale, for it is not quite as pale, because, *in the first place*, the cuticle of a negro has almost always a slightly darker tinge than that of an European; and, in *the second place*, the colour of the subjacent rete will be seen, more or less, through the effused serum of the bleb. The absence of grooves in the surface of the bulla is easily explained, when we reflect that the cuticle forming it is necessarily extended, and the capilluli are no longer visible, because they remain adherent to the cutis from which the cuticle has been raised. They must, therefore, have drawn themselves through the cuticle, yet the holes they traversed are not visible even with the microscope.

Let me next recall to your memory the observations we had occasion to make on

The Appearance and Structure of the Rete Mucosum.

When the cuticle which forms the bulla produced by a blister in the negro is removed, what is the appearance of the denuded surface, that is, of the rete mucosum? When looked upon with the naked eye, it appears of a uniform and pulpy black colour, in general free from those lines which marked the cuticular surface. But when examined with a lens that magnifies a few times, the black colour is seen in minute points, on a pulpy ground, or like granules of a black powder deposited in a cellular structure. Let me also remind you that we observed, emerging from the surface of the denuded rete, those capilluli which, before the application of the blister, had been seen rising through the surface of the cuticle; that when they were pulled with a forceps they offered some resistance; and that each was surrounded at its root by a small groove, and outside this by a slight tumidity, or rising, commonly, though erroneously, called the bulb of the capillulus. All these facts, as you will just now find, should be treasured up in your memory.

The next thing observed after the removal of the cuticle, was the close adherence of the rete to the cutis. You remember, also, that it was in vain we endeavoured to remove the black colour, by gently rubbing the surface of the rete with lint rolled round the end of a probe. Nicholls himself took some lint, and to our surprise, using much force, drew it over the denuded rete, but not a particle of the black matter came away. We are, therefore, authorised to conclude, that whatever be the medium of connection between the rete and the cutis, and between the black pigment and the tissue in which it is deposited, their cohesions are very considerable.

When the denuded rete was exposed for a few minutes to the atmosphere, it sweated, as it were, from innumerable points, a colourless liquid. We tested this liquid, and found it alkaline, although the liquid is acid which the cuticular surface excretes in ordinary sweating. We also found that the fluid effused by the denuded rete was a coagulating fluid, and that the solid produced by its coagulation exhibited, under the microscope, the same texture as cuticle. Are we, from this fact, to conclude that the surface of the rete is capable of exhaling a fluid, and that the cuticle is produced by this effusion, solidified. A similar effusion occurs, I may mention, from the surface of an European, after the cuticle has been removed by a blister.

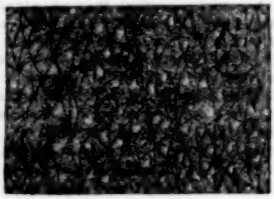
I have just remarked on the close adhesion of the rete to the cutis, but you had occasion to observe that the adhesion is capable, in the living body, of being destroyed, or greatly diminished, by several causes, and, among others, by keeping a

blister on the skin for a longer time than is necessary to produce simple vesication, or by applying a blister for a short time to the surface of the rete itself, after the cuticle has been removed. In either of these cases we find that the rete quickly becomes infiltrated with lymph, and can be then easily removed from the surface of the cutis, in the form of a pulpy and cellular-like membrane, two or three lines in thickness, and tinged more or less black on both its surfaces.

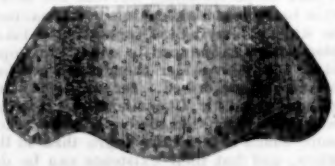
Let me next remind you of the observations I made respecting certain granuliform bodies, which exist in the substance of the rete, or between it and the cuticle, and to which I have given the name of

Epidermoid Glands.

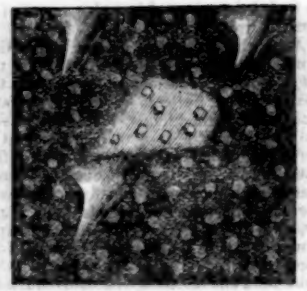
These bodies, in my opinion, have not as yet obtained from anatomists sufficient attention, nor has their existence been employed, as it may be, in explanation of the phenomena of eruptions. They exist in the white as well as in the black races. I have pointed them out to you in both; but they are much more remarkable in the latter. In some parts of the negro's skin they are, by their colour and form, very obviously seen, even through the cuticle. Here is a drawing of a piece of Nicholls's forehead. You



remark that it is spotted with innumerable whitish spots, each about the size of a pin's point. These are the bodies to which I am alluding, and which I have named, as I have already said, the epidermoid glands. Again, here is a drawing of the tip and alæ of his

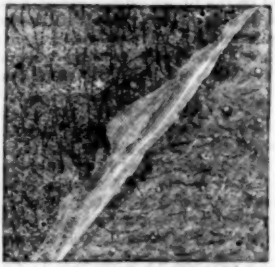


nose. You see it is thickly studded with sand-like points. This appearance is also produced by the same glands. The whitish points, as well as the sand-like eminences, are, however, much larger in the drawings, than they were in nature. Again, here is a drawing in which these bodies are delineated as they exist in another situation. It is a representation of a piece of rete which



had been removed from the arm, along with the cuticle. It appears as viewed with a magnifying glass on its under surface, or on that which was in contact with the cutis. In the middle of the drawing a piece of the rete has been removed to show that these glands lie in contact with the cuticle, or between it and the rete. The drawing also shows the extremities of three capilluli.

I have, Gentlemen, demonstrated to you that if you apply a blister to a portion of a negro's skin, where you cannot detect these bodies with the naked eye, and remove in this way the cuticle, you will be able to see them in the substance of the rete. Here is a drawing which represents the appear-

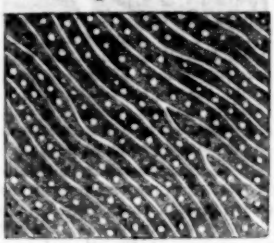


ances observed on the occasion of such an experiment; on one part, which is covered with cuticle, no glands can be seen; but they are obvious on the other, from which the cuticle has been lifted up. We can thus prove that these bodies are everywhere thickly distributed over the surface of the skin. Their number is, therefore, immense. I have counted one hundred of them in the 24th part of a square inch.

The situation of these bodies is, as I have said, between the cutis and cuticle, or in the substance of the rete. Their arrangement varies in different parts. In some situations, as on the fingers and toes, they are placed in straight or spiral lines; but in most parts irregularly, or without any apparent plan. There seems to be two varieties of them,—one surrounding the roots of the capilluli, while the other exists

in their intervals, and is independent of the small hairs.'

As to the existence of these bodies there can be, therefore, no doubt; but what they are, or what function and structure they possess, is not quite so easily demonstrated. I consider them glands, and I am also of opinion that it is upon their action that the perspiration depends. This opinion of their use I formed, in the first instance, from remarking, in the clearest manner, that when the nose of a negro sweats, the minute drops of the excretion can be seen escaping from the cuticle which covers the sand-like spots distributed over its surface. Upon more than one occasion you had yourselves an opportunity of witnessing this phenomenon in Nicholls. After my attention had been thus directed to the use of these bodies, as the organs of perspiration, I sought for opportunities to test my opinion. These were not long wanting, for, after a time, my eye became so capable of ascertaining their situation, even in the skin of the white races, that I have, on innumerable occasions, observed the sweat coming out of them in minute points. I have, therefore, no doubt whatever that such is their function. If you examine the palmer surface of your own hand, when you are in a state of perspiration, you will detect this secretion escaping from the numerous pores, placed on the linear ridges, which this part of our skin presents, and these pores lead to the epidermoid glands, which on the other hand are placed in rows under the cuticle. Here is a drawing which illustrates this ar-



rangement. It is a magnified view of a piece of cuticle from a labouring man's hand, seen from its internal surface, the rete being removed. You remark the granular bodies arranged in rows, and in some spots where these bodies have been removed, you see the pores by which their ducts opened on the linear edges. Now, what is

The Structure of the Epidermoid Glands?

I will tell you all I know upon this subject. 1st. I have already observed, that in the negro, and even in the white, you will often be able to detect a fluid exuding from the surface over these bodies. This implies the probable existence of an excretory duct, but this duct can be demonstrated, in some situations, as I have just now stated, and as the drawing which I have shown you illustrates. 2ndly. When these bodies are enlarged, as on a blistered surface in a negro, you can easily penetrate them, as you have often seen done by me, with the point of a fine needle, and you will then observe that their sensibility is not great, but that they, or the surface upon which they are placed, appear to be highly vascular, for they ooze blood when punctured, more freely than the surface which surrounds them. Hence I conclude that they are more richly supplied with vessels than with nerves. Their vascularity is also demonstrated by their diseases, as I shall have occasion hereafter more fully to point out; and I may also add, that I have been able, with a lens, to detect transparent fibres, which I considered to be vessels running into these bodies, through the substance of the rete. 3rdly. The part of the cutis over which these bodies are placed possesses peculiar qualities, no doubt subservient to them. I have frequently called your attention to facts which demonstrate this, and shall, before I have done with our subject make some applications of them.

The structure, therefore, of the epidermoid granules, as far as it is known, sanctions the conclusion that they are glandular organs; and their vast number leaves no doubt of their great importance in the economy; yet, as I have stated, they have obtained very little attention. In fact, they have been almost totally overlooked by pathologists, and only cursorily noticed by anatomists. Even those anatomists who have noticed them, or made them the subject of particular observation, have had erroneous or imperfect conceptions as well respecting their functions as their structure. The late Mr. Chevalier paid more attention to them than any of his predecessors; he thought, indeed, that he was the discoverer of them, and he informs us that he was of opinion at one time that they were the organs of perspiration, but that not being able to distinguish them in some situations, in which, nevertheless, perspiration takes place, he was induced to change this opinion, and to consider them a second, but hitherto undescribed, set of sebaceous glands. Had Mr. Chevalier been acquainted with the fact, that these glands are much more easily seen in the negro than in the white, and that their existence can be demonstrated by the influence of a blister, in situations in which they cannot otherwise be seen, he could have detected them on every part of the surface, and would not have denied to them, for the reasons which he has mentioned, the power of separating from the blood the perspiratory secretion.

Previous to Mr. Chevalier's publication, and even subsequent to it, for it has not at-

tracted as much attention as it deserves, whenever these bodies were noticed they were taken for papillæ. Hence that state of the cutaneous organ which gets the name of

The Cutis Anserina,

and which is produced by a particular prominence of the epidermoid glands, is supposed to be owing to the erection of the cutaneous papillæ. Again, several eruptions, such as lichen and strophulus, depend on an enlarged and inflamed state of these bodies; but those writers, Willan and Bateman for example, who describe these eruptions, affirm that they are produced by an inflammation of the papillæ of the skin; and the more recent author, Rayer, speaking of these papular diseases, says, that he knows not what seat to assign to them. To correct these errors, you have only to observe with accuracy, what you have daily an opportunity of witnessing, the appearances and seat of the spots which constitute the papular eruptions.

It is remarkable that, notwithstanding the apparent minuteness of Breschet's investigations, these bodies have been entirely overlooked by him; or, what is probably nearer the truth, he has mistaken them for papillæ. I found this observation on the fact that, when he speaks of the papillæ of the negro, he observes, on more occasions than one, that they are whitish, because, says he, their nervous pulp is visible through the black surface. Whereas the white spots on the negro's skin, considered by this writer papillæ, are most certainly produced by the glands in question, which, being placed outside the rete, the seat of colour, or between it and the cuticle, obscure, more or less, the dark tint of the skin.

Breschet says that Eichorn has described ducts in the skin, which he considers perspiratory, and has traced those ducts to the papillæ. From this I would infer that Eichorn had seen the ducts of the epidermoid glands, and had traced them to their origin; but not being acquainted with the nature of these bodies, he calls them papillæ, in conformity with common custom.

Nearly similar observations may be made on the labours of Gaultier. Thus Breschet says, that Gaultier has traced the perspiratory pores as far as the elementary structure of the skin, named by him "Bourgeons Sanguines," and we find that Breschet is of opinion that the "Bourgeons Sanguines" of Gaultier are papillæ.

On the other hand there are, I believe, persons who call these bodies hair bulbs. I have already remarked to you, that there are two sets of the epidermoid glands, one of which are connected with the small hairs. Now, I admit that on a first view these might be mistaken for hair bulbs, but a simple experiment which you have witnessed demonstrates that it would be incorrect so to consider them. Apply a blister to any part of the skin of a negro on which you can remark capilluli; remove the cuticle which this blister may have raised into a bulla. Look now for the capilluli, and you will observe them emerging from the surface of the denuded rete. Examine the point at which they escape from this membrane, and you will find that they are there surrounded by a groove which was filled by a process from the inner surface of the cuticle, and outside this groove by a slight rising produced by the bodies in question. Now, having carried your observations so far, apply a second blister to the denuded rete. In a few hours you will be able to detach this membrane, and then you will find the capilluli springing from the surface of the denuded cutis. Look now for the small bodies which you observed surrounding the capilluli before the rete was lifted, but you can see no such bodies. Why? because they have been removed along with the rete, yet the capilluli are left adherent in the cutis, consequently their root remains behind, hence the bodies removed could not have been the roots or bulbs of the capilluli, nor yet papillæ. They were the glands which surround the capilluli at the point at which they traverse the rete.

I have thus detained you on the subject of the epidermoid glands, because a knowledge of them is of great importance in explaining many of the phenomena of cutaneous diseases, and because you had a very full opportunity of making yourselves acquainted with all the facts respecting them which I have yet mentioned. When we next meet I shall conclude the review of the immediate results of the application of blisters to the negro's skin, and I shall then consider the very interesting and curious appearances which the consequent actions of reparation produce.

CASE OF POISONING IN A CHILD FROM FOUR DROPS OF LAUDANUM.

By J. Johnston Kelso, *M.D., Lisburn.*

Ann Pennington, an illegitimate infant child, of about nine months old, was brought to me on the 23rd of August, labouring under the following symptoms:—There is extreme drowsiness, amounting almost to sopor, with occasionally involuntary, though rather slight convulsive twitches in some of the muscles, more especially of the abdominal extremities. The face, though pallid in a marked degree, is apparently indicative of none, or, at most, very little corporeal suffering, if, perhaps, we except those

slight contortions in the features, which correspond to the periods of its weak moanings. The pupils are both of them considerably contracted, and the eyes are turned upwards under the upper eyelids. The pulse is about 60 in the minute, and intermittent, the intermissions occurring about every sixth arterial beat, that is to say, it beats about six times perfectly regularly, and then there occurs an interval, whose time occupies, I think, about two or three of such beats, during which it is wholly imperceptible to the finger. It is rather contracted, small, but not wiry. The respiration is rather slow, being about 20, deep-drawn, but wholly unaccompanied by any noise or stertor. The surface of the body is generally pallid and contracted, and, as I was informed, there existed no derangement in any of the other functions.

From the mother of the child I obtained the following history of its case, which, as it afterwards appeared, was, perhaps, the correct one. The child having been generally rather peevish and fretful, from its very infancy, she had been obliged, all along, for the purpose of allaying or, at least, mitigating in some degree its frequently rather severe sufferings, as also with the view of rendering it more easily "nursed," gradually but cautiously to adopt a very common, but, generally, a most pernicious practice, namely, the occasional administration of small doses of laudanum; and its having been particularly, and rather unusually "cross" for the last few days, she obtained a small quantity of this medicine from an apothecary's shop in town, which, she asserted, and as it subsequently appeared truly, did not exceed in amount above 20 drops altogether. Of this quantity she had used, during the preceding two days, at three separate doses, each fully as large, and one, as she firmly believed, considerably larger than the portion which remained; and as this scarcely amounted to four drops altogether, she had been led, in one of its fretful fits, some time since, to administer it in a little breast milk. This occurred at about nine o'clock this morning (the morning of the day on which the accident happened), and on observing these phenomena, as just detailed, setting in, she brought the child for my opinion as to the probable cause.

I prescribed for my little patient a strong emetic of the sulphate of zinc, to be followed up by the repeated affusions of cold water on its head; strongly insisting, at the same time, as a matter of course, upon the extreme danger of a persistence of the lethargy, and to endeavour to arouse it from this unfavourable state, by every possible means; and, when once aroused, to use all exertion in order to obviate a recurrence of it.

In an hour or so afterwards, I was informed that, although the emetic had not operated, the little sufferer had rallied not a little from its lethargic condition, and, according to the belief of its attendants, was going on rapidly to improve. Previously to this, I had determined upon using the stomach pump, but on hearing of such a favourable change, and being at this moment called some distance to the country, where I was unexpectedly long detained, I merely ordered, in addition, the exhibition of small doses of vinegar, together with minute quantities of brandy, diluted with water, in the intervals. On my return in the evening, I found that my patient had, in the mean time, died, an occurrence which took place at about 6 o'clock, P.M., being a period of about nine hours after the administration of the laudanum; the slight convulsive tremors, to which I have before alluded, having, as I was told, not only increased considerably in violence, but assumed, towards the close of life, a more protracted character.

The child thus dying so suddenly, and with such peculiar symptoms, suspicion alighted upon its mother, who was a person of ill-fame, and she was taken into custody, until the whole matter should undergo a proper investigation before the coroner. I was, therefore, requested to examine the body.

Necropsy Thirteen Hours after Death.

The face and surface of the body generally were very pallid, and there existed a rather extensive ecchymosis in the lumbar region. Rigidity of the body perfect. On removing the ununited bones of the cranium, with the generally adherent *dura mater*, numerous well-distended blood vessels, of various size, were observed running over, and in the furrows which marked the boundaries of the many convolutions. On puncturing some of these vessels, as also the longitudinal sinus, blood of a viscid and dark molasses-like colour, issued copiously. The cerebral mass was generally much injected with blood of an analogous character; and there existed a considerable quantity of serum both in the lateral ventricles and at the base of the brain. All the organs and parts in the thoracic cavity were perfectly normal, with the exception, perhaps, of a slight engagement of the pulmonary tissue. On opening the abdomen, the stomach, on account of its great distention with gas, was found to occupy nearly the whole of the epigastric region. This gaseous fluid having been liberated by a puncture, the cavity of the organ was discovered almost empty, its internal parietes being merely coated with a yellowish semi-fluid matter. Having washed off this substance, the lining membrane was disclosed, to all appearance, in a perfectly healthy condition. The duodenum, whose mucous tunic was also quite normal, con-

tained a small quantity of a pulpy matter, of rather a yellowish-brown colour, which, as I fancied, emitted a very faint odour of laudanum; but this could not be verified by any of the other gentlemen present. The other organs and important textures in this great cavity were all in a quite healthy condition.

Observations.—Entirely apart from the voluntary confession of the unfortunate mother, regarding the real cause of her child's premature death, it is, I think, fully evident, not only that it was the victim of a narcotic poison, but also that the poisonous agent was a preparation of opium, both from the phenomena manifested previously to death, and from the morbid appearances subsequently divulged on dissection. With this preliminary but unavoidable admission, the main points, then, for consideration, obviously are, first, whether the quantity of laudanum amounted really to no more than that above mentioned; and, secondly, whether the medicinal fluid thus administered, was not above the regular pharmacopœial strength.

But, previously to replying to the first of these questions, I may here premise that, in a few cases upon record, death has been known to have resulted from the administration of a smaller quantity of the medicinal preparation in question, than that which we find to have been employed in the present instance. In one of these cases related by Dr. Alison, three fluid drops of this medicine were followed by a fatal narcotism; and in another, detailed by Dr. Christison, a similar melancholy result was succeeded by even two drops and a half. The former of these gentlemen has also repeatedly witnessed unpleasantly deep sleep produced by two drops only; and there are other recorded instances of a like character. I myself, too, have seen deep somnolence supervening on the administration of three drops of laudanum, in a child of about six months old, requiring the aid of the stomach-pump. The result, in this case, proved most satisfactory. But in the above two cases which proved fatal, the subjects of them, it is to be remembered, were infants of not many days old, whereas, in the present one, the child's age, as has been already mentioned, amounted to nine months, and, as was most satisfactorily established, it appeared to have been tolerably well habituated to the influence of this drug.

To remove, however, as far as possible, all grounds for scepticism, regarding the real quantity of the laudanum here given, it will be necessary to review very briefly the leading facts, in relation to its amount, as elicited in the evidence on the coroner's inquest. And here it is right to remark, that, among all the witnesses examined with the view of clearing up this chief, if not only, desiderated point, there existed not the least discrepancy of opinion in their respective testimonies. In their evidence, then, the three witnesses all of them distinctly stated, that, out of a small quantity of this medicine, obtained a day or two previously from an apothecary's shop in town, there only remained, on the morning of the accident, as far as could be judged from a most careful investigation of it, about four fluid drops, if, indeed, so much. And previously to the administering to the child this small dose,—*small* at least as compared to some to which, as it appeared, its parent had accustomed it,—who, it was stated, was at this time very peevish, the possibility of its proving dangerously large was remarked upon, but never for one moment dreaded by any of those persons who took part in the proceeding: accordingly it was unhesitatingly given, at about the time before mentioned, or almost immediately after its first awaking from its night's repose. The phenomena of poisoning, as has been above observed, soon afterwards set in, progressing, as they did, gradually in intensity and virulence up to the close of life.

This plain statement of the facts of the occurrence, coinciding, as it perfectly does, with the original and, most likely, unsophisticated one of the then prisoner, as first communicated to myself, may, I think, be implicitly relied on, as approximating as near as may be to the truth. Thus far well; but the sceptic may here be inclined to inquire, could no extra and clandestine dose of this narcotic, have been given either previously or subsequently to the one acknowledged to by the then implicated party. I most certainly think not; first, from its toxicological effects being developed at about the usual time after an overdose of this energetic poison, which, together with the circumstance of the little patient having just awoke from its night's repose, and therefore in all likelihood free from the effects of any noxious agent, renders the idea of a previous dose wholly improbable; and, secondly, from the fact of no more of this medicine remaining at the time in the house, in conjunction with the circumstance of its being nursed almost by strangers from the period of the administration of the acknowledged potion.

In regard to the other question, I have only to observe, that the evidence of the young gentleman, who, two days previously, dispensed the laudanum to the then prisoner, and which, as he perfectly recollected, did not exceed in amount the precise quantity which she primarily admitted to myself to have received, viz., twenty fluid drops,—went to establish the point, that this fluid was of the usual strength as prescribed by the Pharmacopœia. He also remarked, that she had been long in the habit of obtaining regular, though generally gratuitous, and, of course, not large supplies of this medicine, for the

purpose, as she invariably stated, of dosing this same child, as it could not otherwise be managed except when under its well-known effects.

Lisburn, Nov. 10, 1837.

SUCCESSFUL OPERATION FOR THE REMOVAL OF AN OVARIAN TUMOUR.

To the Editor of THE LANCET.

SIR:—Considering the publication of well-authenticated cases (whether successful or not) as one of the best means of establishing a true and legitimate practice, I beg you will receive it as my best apology for the liberty I take in transmitting the following case for insertion in your valuable Journal, should you consider it worthy the notice of the medical profession.

In No. 18 of THE LANCET, for January 21st, 1837, there are recorded some cases of operations for the removal of abdominal tumours, and ovarian dropsy, by R. C. King, Esq., surgeon, Saxmundham, Suffolk. The two ovarian tumours were removed successfully, one by Mr. Jeaffreson, of Framlingham, the other by Mr. King himself. Mr. Jeaffreson's case was discussed at the *London University Medical Society*, on Friday, December 2, 1836 (see THE LANCET for January 7, 1837), when some objections were raised against the operation, but as ovarian disease is considered incurable, and sooner or later terminates fatally, some hazard might justifiably be run in its treatment.

The following case tends to corroborate as well as to justify the plan of treatment successfully adopted by Messrs. King and Jeaffreson, who first conceived the practicability, and afterwards successfully performed the operation.

CASE.—Mrs. Hurrion, of Southborough, æt. 45, mother of three children; dated the the commencement of her complaint 13 years back. About four years ago I was requested to attend her in her accouchment. Knowing that a tumour was existing, I made an examination *per vaginam* at the latter period of gestation, with a view of ascertaining the relative situation of the contents of the pelvis. I then found the tumour pressed down between the uterus and the brim of the pelvis; by gentle pressure upwards the tumour receded into the cavity of the abdomen, and the uterus descended to the brim. The same evening labour came on, and she was released from her trouble before I could arrive. She had formerly applied for relief at the Tonbridge Wells Dispensary; a seton and a variety of remedies were tried for a considerable time without benefit.

During the last year the disease had made rapid progress; and the abdominal tumour became so large as to impede respiration, and to produce other distressing symptoms, so that it now became imperative to take some decisive steps, either for the present relief or ultimate recovery. I mentioned to her the two modes of treatment, the one only palliative and temporary; the other a more serious operation, but with a reasonable hope of a permanent cure. She decided on the latter. The operation was performed on the 2nd of November. My friends Dr. Scudamore and Mr. Hargraves, of Tonbridge Wells, very kindly lent me their able assistance. *They* first examined the tumour and both were perfectly satisfied as to the expediency and reasonableness of the operation. The first incision was commenced about one inch below the umbilicus, and carried downwards to the extent of about two inches. This part of the operation was done by pinching up the common integuments and dividing them with the bistoury. This mode of cutting through the integuments I prefer in hernia, as well as in this operation, as it can be done more expeditiously, and at one stroke of the knife. The fascia was then carefully dissected, and the peritoneum exposed, into the lower part of which a small opening was made to allow of the introduction of a director. The part was then laid open, and the ovarian tumour exposed to view. It was secured from retraction by passing a ligature into a small portion of the cyst; the trocar was next introduced, and about twenty pints (or more) of fluid withdrawn. So far from the cyst retracting, it was rather propelled outwardly by the fluid; by gentle traction the whole sac was brought away. A ligature of stay silk was passed round the connecting membrane and fallopian tube, tied very tight and cut short; the cyst was then cut off with the scalpel, and the part replaced in the cavity of the abdomen. The edges of the external wound brought together by four ligatures, and strips of adhesive plaster. Not more than a spoonful of blood was lost, and she bore the operation well. She was put to bed, two grains of opium given her, and repeated at bedtime, with four grains of calomel. Cold spirituous lotions were constantly applied over the abdomen.

Nov. 3. Very little pain, no swelling, or tension; no sickness; pulse 90; passed her water freely; bowels confined. Ordered four grains of calomel, and the following saline aperient:—

℞ *Sulphate of Magnesia*, ℥ss;
Carbonate of Magnesia, ʒj;
Spirit of Nit. Ether, ʒiij;
Mint Water, ℥v;
Syrup of Poppies, ʒiij. To take a fourth every four hours.

4. Some increase of pain; pulse 100; sickness and slight vomitings; bowels constipated; more pain, but no tension or swell-

ing.—Ordered, *Hydrarg. submur.*, gr. iv., and a mixture of *Magnes. sulph. et Infus. sennæ*, to be repeated at intervals, with enemas, till the bowels are relieved.

5. Considerably better; bowels open; slept well; pulse 84, and all the symptoms much subdued.

6. Still better; no fever; no pain; the wound had healed by the first intention. She had hitherto been kept exceedingly low. Ordered a cupful of weak broth. From this time she rapidly recovered.

Remarks.

At a meeting of the *London University Medical Society* some objections were stated against the operation:—

First. That it is inapplicable in cases in which adhesions have formed. This certainly may be an objection, but these adhesions do not, in my opinion, take place so often as is imagined, for the tumour is enveloped in a reflection of the peritoneum. It did not take place in this case, although thirteen years had elapsed since its commencement.

Secondly. The danger of peritonitis. I conceive that the danger from this cause is much less than in the operation for strangulated hernia, as in the latter the parts are always in a state approaching to, if not of, actual inflammation. It did not take place in either Mr. Jeaffreson's, Mr. King's, or the present case.

Thirdly. When the cysts are numerous. This is easily put to the test by first having recourse to paracentesis. If a large portion of fluid escapes without interruption, it would not be very probable that many cysts existed, and even then they might be punctured.

Fourthly. The disease being complicated with other tumours. This is also a difficulty which might be ascertained by first drawing off the fluid, and then exploring the contents of the abdomen. I am, Sir, your obedient servant,

W. J. West.

Tonbridge, Nov. 18, 1837.

CASE OF DOUBLE CEPHALEMATOMA.

To the Editor of The Lancet.

Sir:—Will you allow me to make a few observations respecting cranial swellings in infants, and in doing so I shall give the particulars of a case which I attended some time since. I am induced the more to do so in consequence of reading some remarks upon cases of cranial swellings in the "British and Foreign Medical Review," by Professor Karl Nuger, and Dr. Geddings, in which it is stated that the English have paid less attention to such cases than our continental physiologists. I beg, however, to differ with the reviewers of the above, and to refer them to the "London Medical Gazette," where they will find the following, proving that we are much indebted to our own countryman, the late Dr. W. Hunter, for recording many such cases:—

"In many children, a few hours after birth, a large soft tumour appears on the head, commonly a little to one side of the very top of the head; it is formed by blood, by the rupture of a vessel in the scalp at birth. Frequently there seems to be an edge of the skull all around, as if there were a large perforation, or want of bone, at the place, but this is a deception,—some very good surgeons make it a rule to open it, but this is cruelty, for there is never occasion. The child's health is never hurt by it, and it always goes away of itself,—generally within the month, sometimes later, and, for the most part, continues without diminishing to very near the last, then it begins to be sensibly a little softer, like a bag of fluid that is a little emptied, after which it disappears very fast.

"I have never seen one case that did not do well of itself, not even among 12,000 children that have been born at the *British Hospital*, which I have attended since its institution; at first I tried many discutient applications, but I soon found that they were both useless and unnecessary."—*London Medical Gazette, from an original MS. of Dr. W. Hunter.*

These swellings evidently contain blood, generally, I believe, extravasated from between the bone and pericranium, and situated upon the bone, and seldom or ever over one of the sutures. Fluctuation is generally pretty distinct; they are not the result of *violence* or *parturition*; some are deep-seated, others superficial; and, according to their situation, so might they be named; they would, however, still only be varieties of the same. The sensation conveyed by touch is that of a ring of bone having a deficiency or depression in the centre, which has occasionally given rise to the mistake of its being encephalocele.

The colour of the skin is not at all changed, nor is there any apparent pain in the tumour, as it may be pressed or moved about without any evident pain to the child.

These swellings have occasionally been mistaken for hernia cerebri; this mistake, however, may be easily avoided; first, the hernia cerebri is always situated over one of the sutures, and influences the brain when pressed upon; this is not the case with these cranial blood swellings; again it is stated to have been mistaken for the caput succedaneum; here, also, the mistake may soon be cleared up. The latter is always situated at the posterior and superior part of the head, and generally subsides in 24 hours.

In one or two cases I have been induced

to puncture these tumours, at the suggestion of some of my medical friends, who I have taken to see them; I have, however, found this plan to be rather injurious than otherwise, the swelling generally filling again within 24 hours, and purging following the operation; and I know I have taken the most favourable cases for puncturing, as those which I opened were very *superficial*, small, rounded, and prominent, arising principally from the thinness of the covering, and not where they were deep-seated, or even situated between the pericranium and the bone. In one case, and only in one, I recollect a new layer of bone to have been formed, or a portion of the pericranium remained separated from the bone, and this could be distinctly moved about after the swelling had subsided. Dr. Rigby related a case of a similar kind to me; and in the surgical work of Professor Chelius, of Heidelburg, he mentions two cases in which the formation of a new layer of bone had been observed to take place upon the tumour, where the pericranium had been separated from the skull, by the above-mentioned collection of grumous blood, forming a firm surface beneath the scalp, which yielded easily to the pressure of the finger, but distinctly returned to its former shape with a crackling sensation, like that produced by pressure upon a hollow sphere of any thin copper. I do not believe, as I have before-mentioned, these tumours ever to arise from *violence* or *pressure*, but to be the result of diseased or a weak state of the vessels, *veins;* and as a proof of their not being the result of violence in pressure, I met with one of these bloody swellings in a case of a presentation of the nates, and therefore I consider such a case will warrant my opinion.

I must differ with the reviewer of Velpeau,* where he states,—"We have *seen many* cases of these sanguineous tumours on the heads of new-born children, and upon some few points we differ from Dr. Geddings; we believe with Velpeau, that pressure on the head during labour is the ordinary cause of these tumours. We have generally seen them after *difficult* and *contracted* labours, in which the head of the child has borne *long and severe pressure*," &c. I do not consider *pressure* to be the cause of these swellings. The caput succedaneum is produced by pressure I will allow, but certainly not these bloody tumours. I think I need only bring forward one case to disprove the Reviewer's opinion,—it is that of a breech case, which I attended, and in which case there was one of these blood swellings upon the cranium. Now, in this case it certainly could not be the result of "long and severe pressure."

The cause of these swellings Dr. Geddings and also Professor Naegle considers to be the result of original disease of the veins; and Professor Nuger mentions his having seen the bloody tumour of the head complicated with nævus. The following is an extract from his work:—"In an interesting paper, 'Von den Muttermälern des Kopfes,' in the same work, M. Nuger states it as his belief that the nævus, termed by us aneurism, or anastomosis, always depends upon a preternatural weakness and expansion of the parietes of the veins of the part; he does not admit that the arterial branches are affected; upon this subject there is still some doubt, but we have arrived at the same conclusion as M. Nuger, not merely from observing the appearance of the disease, but after having carefully injected and dissected several specimens of bloody nævus.—'The Tumeurs Parequendes" of Boyer, or the 'Tumeurs erectiles' of Dupuytren.'"—*Rev.*

I consider the opinions of M. Nuger, Dr. Geddings, and Professor Naegele, tend very much to prove the uselessness and injuriousness of puncturing these tumours; should they be the result of diseased veins, they are not relieved by letting out this grumous blood more than for the time, as they fill again in a few hours, generally in twenty-four, as I have myself seen in those which I have punctured; and this operation has invariably been followed by purging, &c., as to interrupt the powers and process of absorption; and it is well known that the powers of the child at this period are greater than at any other; indeed, so great are they, that the child doubles its weight in six months from the time of its birth, therefore there is greater probability of tumours being absorbed at this period of life than at any other. Another objection to opening these tumours is, that by so doing you assist in forming caries (if it occurs at all) by admitting atmospheric air, and not, as is stated by some of our authors, by the pressure of the blood upon the bone. Having said thus much I will now give the particulars of the case first alluded to.

I was requested to attend a lady of delicate habit, fair complexion, aged about 22, in her first accouchment. I saw her at the commencement of labour, the pains of which continued more or less for two days. No unfavourable symptoms being present, I was not apprehensive of any bad consequences from the length of time, and therefore did not interfere farther than ascertaining the progress of the labour, till the afternoon of the third day, when, finding the os uteri well dilated, relaxed, and the head in the pelvis, the patient now showing symptoms of exhaustion, I gave some ergot (decoction made at the time), and after a repetition of the dose the child was expelled, when immediately two large swellings were observed upon the head of the child; and I wish

* Accouchmens, t. ii., p. 393, second edition.

here to remark, that it is uncommon to see these bloody swellings immediately upon parturition. The nurse's phrase, perhaps, will give some idea of the appearance these tumours had, as she exclaimed, upon taking the child, that it had *three heads*. It was a fine, full-sized female child. The form and situation of these tumours were as follows:—One was considerably larger than the other, the larger being nearly that of the child's head, the other that of a small orange; the larger situated upon, and covering the whole of, the right parietal bone, extending a little upon the superior part of the occipital bone, measuring round its base eleven inches and a half; and a tape carried from the edge of the base to a corresponding and opposite part of the base, over the most elevated portion of the swelling, measured seven inches and a half. The lesser swelling was situated at the under and back part of the larger, but not communicating, as pressure upon the one did not produce the slightest effect upon the other, or upon the brain of the child.

The treatment merely consisted of spirit-wash, frequently applied (warm), and this of itself would have been sufficient, but that the child suffered for some time from purging, in consequence of the nurse imprudently having given the child food, the mother not having sufficient milk; when, however, the purging ceased, which lasted for nearly a fortnight, and the mother had a good supply of milk, the tumour began to be absorbed, giving the sensation of a bag half filled, and in about three weeks more, in all six weeks, these tumours had completely subsided, and the child has continued thriving ever since. I remain, Sir, your obedient servant,

MATTHEW F. WAGSTAFFE.

Lambeth, Nov. 8, 1837.

CASES OF SALIVARY FISTULA,

TREATED ACCORDING TO

THE PLAN OF M. ROUX.

By F. X. MOSELEY, *Esq., Surgeon, London.*

CASE 1.—Mr. J—— came under my care, May 1835, with a lacerated wound of the left cheek, from having fallen against an iron railing. The buccinator was divided, with a portion of the masseter and the lining membrane of the mouth. Having carefully placed the edges of the wound in apposition, by strapping, I placed over it a compress, as I was very desirous, from its situation, that there should be union by the first intention. Much inflammation, however, succeeded, and the above object was but partially accomplished; suppuration, and, along with the pus, saliva, flowed in considerable quantity.

It was now obvious that a salivary fistula was established. Canterisation of the edges of the ulcer, and, afterwards, compression, were applied, but failed in effecting a cure. The fistulous opening evidently communicated with the duct of Steno, and not with the substance of the parotid gland. On introducing an Anel's probe through the natural orifice of the duct, on the inside of the cheek, it was stopped, after a course of about an inch, by what appeared to be an obliteration of the canal, and the same thing took place on attempting to pass the probe from the fistulous opening without.

Finding that the cavity of the duct was obliterated between the fistula and the orifice of the mouth, the further use of caustic or compression, or any similar proceeding, could clearly avail nothing, unless a route into the mouth were made for the saliva. Consequently I proceeded to an operation, and resolved on following the practice of M. Roux; and first of all I exposed the bottom of the fistula, by excising a portion of diseased skin which surrounded the external opening. The next step consisted in making two successive perforations of the cheek from without inwards, by a hydrocele trocar, taking care to avoid the gum. The openings were made on an horizontal line, and a quarter of an inch distant from each other; the one corresponded directly with the bottom of the fistula, exactly opposite the external openings; the other was nearer the parotid gland, and close to the anterior border of the masseter muscle. A small seton, composed of silk threads, was then passed through both openings, and the ends were tied, loosely, in a knot.

A good deal of swelling and inflammation of the cheek succeeded, but was quickly subdued by local applications. A superficial abscess, however, formed, close to the parotid gland, and communicated with the wound which had been made in the operation. It was freely opened, and the skin, or, rather, the old cicatrix over it, was removed, so that the two wounds were laid into one. The saliva continued for some time to flow, in part externally and in part by the openings into the mouth. Light dressings and gentle compression were employed, and the seton-threads were frequently moved backwards and forwards, in order to render the perforations completely fistulous. At one time strong compression was made on the external wound, but it brought on a return of inflammation which extended to the parotid gland itself, it was, therefore, abandoned.

Six weeks after the performance of the operation, the saliva, all at once, ceased to flow from the wound, which rapidly cicatrised, and soon afterwards the silk threads came away spontaneously. The cicatrix which ensued proved to be smooth, regular,

and unaccompanied by any appreciable deformity. On the internal membrane of the cheek a transverse sulcus, with slightly elevated margins, could be felt, from which the saliva flowed into the mouth.

Case 2.—Sarah Mine, a country girl, applied to me in July, 1836, with a fistulous opening on the right cheek, which had been present since an abscess had formed, and been opened with the lancet. Caustics and compression had been employed by the medical man who had opened it, without avail. The perpetual dribbling down of the saliva was giving rise to a train of evils. On introducing an Anel's probe at the ulcer it easily glided towards the parotid, though it would not go towards the orifice of the mouth, which I found to be obliterated, on passing the probe from the natural opening.

In this case I proceeded in the operation as with the previous patient. Her recovery was, however, more speedy, being unaccompanied with the subsequent abscess.

Case 3.—Richard White, æt. 50, was under my care in Oct., 1837, having lacerated his cheek by a fall upon some stones. The wound extended into the buccinator and masseter muscles; its edges were carefully brought together, and over it a compress was placed, and the patient was cautioned against disturbing the application. The wound healed rapidly, and with the exception of a small fistula, through which there was a discharge of a clear liquid, especially while eating, which showed that the Stenonian duct had been wounded.

From the man's great objection to an operation, some months elapsed prior to its being commenced. During the interval several fruitless attempts were made to effect a cure.

In this case I again converted the fistula into a recent wound, by the excision of its sides; then, with a small trocar, I perforated the cheek, from the wound, passing the instrument obliquely backwards. Having withdrawn the stilette through the canula, which remained in the perforation, I passed the end of a fine leaden wire. Then withdrawing the canula, I, in the same manner, made a second puncture, beginning, however, within the mouth, about three lines anterior to the former puncture, carrying the point of the instrument obliquely until it passed into the wound, near the place where the wire was inserted. The external end of the wire was passed through this opening into the mouth. Being thus bent somewhat in the form of the letter v, the ends of the wire were then twisted together, and the external wound was closed by a needle, and the twisted suture was employed. For the first three days there was some distention and pain, owing to the saliva not passing at first very readily by the side of the wire. On the fifth day the saliva passed freely into the mouth, and the swelling was nearly gone; the external wound had united, and the needle was then removed. Still the internal fistula was not so complete as to carry off all the saliva while the patient was eating.

The duct was distended into a kind of sac, producing during his meals a small tumour, which was, however, easily emptied into the mouth, by a very slight external pressure. The leaden wire remained inside the cheek until the cure was complete.

89, Connaught Terrace,
Nov. 16, 1837.

CASE OF

STRICTURE OF THE URETHRA CURED BY DIVISION.

By Edward V. Mainwaring, *Esq., Surgeon, Birmingham.*

Mr. B——, a retired maltster, aged 55, in easy circumstances, residing in this neighbourhood, consulted me on the 5th November, 1836, in consequence of great difficulty in voiding his urine. He stated that he had never suffered from any serious complaint, with the exception of repeated attacks of syphilis and gonorrhœa during youth; but he had been subject to difficult micturition, with occasional discharge of mucus, for the previous fourteen years; that he had been under surgical care for the last three years, and that the treatment was commenced by the use of the catheter, caustic bougie, and stilette; that soon after their use he had a painful straining on attempting to relieve the bladder, with occasional prolapsus recti, and a constant involuntary oozing of urine night and day, which rendered the odour from his clothes so offensive, that he became an object of disgust, not only to himself, but to all around him. These instruments had been since frequently used, but without the slightest relief, and he stated that a full-sized catheter had been often passed its whole length, but he felt assured that it had never entered the bladder. His general health had, for some time, been declining; his appetite impaired; bowels confined, and he had become much emaciated; the difficult micturition, urgent straining on attempting to make water, with occasional prolapsus recti, and the involuntary oozing of urine, have gradually increased during the three years previous to his consulting me. He then complained much of a bearing down about the rectum, and there was considerable pain and tenderness on pressure about the lower part of the bowels; no hemorrhoids; his countenance pale and haggard; pulse 87, soft and regular; tongue thickly coated with a cream-coloured fur; skin soft and moist; but at night violent perspirations came on, which saturated the clothes; sleep much disturbed.

On examination I found a hard cartilaginous thickening of the urethra commencing just before the bulb, and extending an inch or more; the prostate gland was increased in size, but not painful to the touch. A full-sized soft bougie passed with ease down to the stricture, and I made some efforts to force it through, but did not succeed; a common-sized catheter was next tried, and by keeping its point steadily against the upper portion of the urethra, I insinuated it into the stricture, and by continued pressure, it passed into the bladder, and there immediately flowed forth three or four ounces of urine, dark-brown in colour, and highly offensive, depositing in a short time a considerable quantity of mucus, during the expulsion of urine. I distinctly felt the fluttering blows of the bladder, as described by Mr. Guthrie, and I desired my patient to lie down and turn into several positions. On his turning to the left side, more urine issued from the catheter, of the same offensive character; when the urine had ceased to flow, he complained of the catheter giving him great pain, and I withdrew it, recommended him to lie in bed with the pelvis raised higher than the thorax, to take ℥iij of the *decoction of pariera brava*, four times a day; to use 40 drops of laudanum in a starch injection, when the pain and bearing down came on, moderate diet, and a grain and a half of opium at bedtime.

Nov. 6. Feels better; has had less oozing of urine during the night, and makes water easier. After several attempts I introduced the catheter again, with similar results to those obtained yesterday. It was clear that my patient was unable to relieve the bladder effectually, without artificial means, for he had made every effort to empty it, just before my visit; the catheter was again withdrawn on account of the pain it gave. Continue medicine, &c.

7. Same report as yesterday.

8. To-day he feels as if he could bear the catheter, and a gum-elastic one on an iron stilette was therefore introduced, and left in his bladder. Continue treatment as before.

9. Has had much pain and irritation from the catheter, and has vomited several times during the night; the matter ejected is of a light verdigris colour. To have some effervescing draughts frequently, each containing one drop of hydrocyanic acid, and the opiate pill at bedtime; the catheter to remain.

10. The irritation from the catheter has produced such severe vomiting and prostration, that I am obliged (however reluctant) to withdraw it. To apply fomentations, and continue as yesterday.

11. Feels better; has passed a comfortable night; the oozing of urine has ceased, and I determined to discontinue the use of the catheter, until all irritation had subsided. The draughts to be omitted; the decoction to be resumed as before.

14. The irritation having subsided. I tried the catheter again; it passed with ease its full length, but no urine escaped, my patient exclaiming at the same time that it was in the same passage as the medical gentleman who was his former attendant had always entered. This appeared to be the case; for after withdrawing the instrument a profuse bleeding took place, which continued several minutes; shivering and sickness supervened. These symptoms subsided in three hours, and I left him requesting that the same treatment might be continued as before.

18. To-day I made another trial of the catheter, but the same misfortune attended this attempt, and in two hours after leaving the house, I was recalled by a message, stating that my patient was dying. I hurried back, and found him vomiting and retching violently; a cold clammy perspiration pervaded his whole frame; his pulse feeble and quick; his articulation scarcely audible. I immediately gave him some ammonia, camphor mixture, and laudanum, which relieved him considerably; he however complained of faintness and sickness the whole night, and I gave him repeatedly the effervescing draughts, containing one drop and a half of hydrocyanic acid in each, and twice a pill containing two grains of opium.

19. He is much rallied, but still very weak and low; urine deposits quite as much mucus as before, and the involuntary oozing has returned. To continue as yesterday.

21. Much better, and I recommended him to have the stricture divided. This he refused, and hoped I should be able to make a passage without cutting. I explained the necessity for such an operation, but he still persisted in refusing, leaving me no alternative, but to recommend him to continue the use of the decoction as before, and half a grain of acetate of morphia at bedtime. This treatment he steadily adhered to with benefit, up to December 12th, when he had an attack of influenza, which debilitated him and increased his urinary complaints to a great degree, and at this time Dr. Evans was consulted. The treatment prescribed relieved him; and in ten days he was able to resume his usual pursuits; the *decoction of pariera brava* was again given with the addition of 30 drops of dilute nitric acid to each dose, and his general health attended to as before. He remained better until June; that is, he could make water in a fuller stream, his urine did not deposit so much mucus, the involuntary oozing was lessened, but still troublesome, and his strength and spirits were much rallied. In the beginning of June he caught cold and his urinary disease became much aggravated; he now had frequent desire to make water, great straining and bearing down

about the anus and neck of the bladder; the stream of urine very small, with frequent interruptions from flakes of mucus plugging up the urethra; the urine alkaline, dark-coloured, and highly offensive. I again tried to relieve him by means of the catheter, &c., but all my efforts to pass it into the bladder were fruitless, and I repeated my request to be allowed to divide the stricture, and to obtain a good passage into the bladder. After some delay he consented, and on the 13th of June he submitted to the operation, Mr. D. W. Crompton and Mr. Baker, a student of Mr. Ledsam's, kindly assisting. Having secured him on the table, as for lithotomy, I made an incision in the perineum down to the stricture, which I carefully divided as far as the hardness existed. I now explored with the finger, and feeling satisfied that the diseased parts were completely divided, I selected a small gum catheter, and was fortunate enough to find the other portion of the urethra, and to pass it into the bladder. I now thought if this catheter could be passed up the other portion of the urethra, the operation would be complete. For this purpose I selected a large-sized gum catheter, and passed it down the urethra, and drew the point back through the wound in the perineum; I then cut off the end, and also cut off the top of the small catheter that was in the bladder, screwed it into the open end of the large catheter, and gently drew it up the urethra; by these means the small catheter was introduced the whole length of the urethra, and having secured it there, I dressed the wound with a little oiled lint, and put my patient to bed. He bore his operation exceedingly well, and I left him under very favourable circumstances, recommending an anodyne draught at bedtime, if necessary, and an enema next morning. At the end of five days I withdrew the small catheter, and passed with ease a full-sized one, which remained in his bladder without causing the least uneasiness. I recommended him to use injections into his bladder two or three times a day of warm water, occasionally changing it for decoction of marsh mallows, which afforded him much comfort; and he took, as medicine, the decoction with nitric acid as before. At the end of a fortnight the wound was quite healed, and he had so much improved in health that the catheter was withdrawn, and introduced once a day only. In the beginning of August my patient was capable of introducing the catheter himself, at any time he felt disposed; the mucous deposit had entirely ceased, and the bladder seemed to be gaining its natural capacity. I had an interview with him last week. He could make water in a full stream; the involuntary oozing has never troubled him since the operation; the pain and bearing down about the rectum and bladder have also entirely ceased; bowels quite regular; appetite good; he has the appearance of robust health; and he stated that he never was better in health in his life.

ASCITES TREATED BY ACUPUNCTURE.

To the Editor of THE LANCET.

SIR:—I have read in last Saturday's No. of THE LANCET, an account of a case of ascites treated by acupuncture. It reminded me of some cases which I treated by acupuncture, about two years ago; and I should have been happy to have sent you the notes taken at the time could I have laid my hands on them. I have also, in the Infirmary at this place, a very bad case of ascites, of fourteen months' standing, in a girl about nineteen years of age, which has resisted various remedies under one of the medical gentlemen resident here, tapping having been once performed, and in which I am endeavouring to give relief by acupuncture; but having only begun puncturing about eight days, I have no decided results to relate.

My general impression of acupuncturation in cases of abdominal dropsy, under my own experience, is that, while it does no harm in all cases not depending on an inflamed or tuberculated state of the peritoneum, it will prove an important auxiliary to the action of diuretic medicines, and may not unfrequently prevent a resort to tapping.

I should fear that the punctures recommended by Mr. King, will prove to be too numerous,—at least, I have never found it necessary to exceed three,—on alternate days, or thrice a week, as circumstances may allow of. The operation is attended neither with pain nor difficulty, a drop of the effused fluid, like a bead, following the exit of the needle, being the unequivocal sign that the peritoneum has been penetrated.

I do not know that there is any novelty in this operation, or mode of treatment in dropsy, for I think I can recollect that it has been recommended as far back as 1821.

Now that the practice is made known in your widely circulating Journal, I trust it will be fairly tried by men enjoying extensive opportunities of making such professional experiments; I have little hope of this trifling operation, or any thing else, doing good, in the case now under my treatment; but if I should succeed I shall be happy to send you my memoranda. I remain, Sir, your most obedient,

J. J. FURNIVALL, M.D.,
Physician to General Infirmary at Hertford.

Hertford, Nov. 20, 1837.

THE LANCET.

London, Saturday, November 25, 1837.

"THEY manage these things better in France," may well serve as a text for the observations which we are about to make on the present occasion; for in no particular connected with medical affairs do the institutions of this country appear so inferior to those of France, as in the administration of hospitals, and other public establishments destined for the relief or reception of the sick-poor.

England is a country the inhabitants of which abound in charity and in wealth; there is here no want of sympathy for the sufferings of the poor; no dearth of means for their alleviation during sickness; no lack of benevolence on the part of individuals who, to humane intentions, join the possession of the most ample fortunes; thousands upon thousands of pounds are yearly contributed by the charitably disposed inhabitants of this metropolis for the support of its numerous hospitals, infirmaries, and dispensaries; the amount of property which these institutions have received in the shape of donations, or bequests, is enormous; yet the intentions of the humane are defeated, and the funds which they have so liberally supplied produce, comparatively speaking, but little benefit, because of the improper and ruinous manner in which the administration of our public medical charities is conducted. The defects of this administration, and the deplorable consequences thence resulting, have been so frequently pointed out and denounced in the pages of this Journal, that at present we shall confine ourselves to drawing a simple parallel between the systems of hospital government which prevail in the capitals of France and Great Britain; or, to speak more correctly, between the well-ordered administration of the Parisian hospitals and the pernicious system, by which the utility of our own hospitals is so considerably diminished.

The city of Paris, with a population amounting to more than 800,000 souls, contains fourteen hospitals, and eight establishments denominated "hospices." Of the hospitals, seven are general hospitals, that is to say, receive all kinds of patients; while seven are "special," or are appropriated to a particular class of patients—the children's hospital, for example, the two venereal hospitals, &c. The establishments denominated "hospices" correspond pretty nearly with our houses of refuge; there are two for the reception of the aged sick of both sexes; two for aged incurable patients; one for orphans; and one for foundling children.

The administration of the civil hospitals, "hospices," and several other establishments in favour of the sick-poor, is confided to the direction—First, of a body called the "General Council of Hospitals;" secondly, to a Committee of Administration, composed of five members; thirdly, to a Chief Secretary and Treasurer. The General Council is composed of seventeen members, of whom the Prefect of the Seine is always president, and the Prefect of Police a member by right of office; the other members are named by the King, for a period of five years, from a list of five candidates presented by the General Council. These members, or, as we might term them, according to the English idiom, Governors, exercise all their duties gratuitously, and they are generally selected from amongst the men most remarkable for distinguished station, moral virtue, or elevated rank. Thus, for example, the President of the Chamber of Deputies, some of the judges, and several of the higher nobility are usually members of the General Council.

This latter body assembles for the transaction of business every eight days, and determines on all matters necessary for the direction of the vast establishment over which it presides; its orders are countersigned by the Prefect of the Seine, or, when relating to very important affairs, by the

Secretary of State for the Home Department. In addition to this, each one of the members of the Council is charged with the special superintendance of one or more of the establishments placed under the care of the Administration. The duty of the sub-committee, or Council of Five, is simply executive; the members of this Council direct and manage all the hospital property; the accounts of the various establishments; the offices of the Central Administration. They are assisted by several clerks, &c., the whole number of persons employed being one hundred and eight.

This is a brief but accurate account of the system of administration which has been pursued with regard to the Parisian hospitals since the year 1804. Before that period, and as far back as the year 1799, the contract system had been employed, but gave rise to such loud and long-continued reclamations, that it had to be abandoned, after a trial of five years. The system now in use has been found to unite the greatest number of advantages possible, and its utility has been fully sanctioned by the test of experience.

The sketch which we have just given will enable our readers to draw a rapid parallel between the organisation of hospital administration in Paris and in London, and to weigh the relative advantages or disadvantages of each system. Under one, we find a simple body directing and managing one vast but single establishment; under the other system (if system there can be where all is confusion and disorder), we observe a number of governing bodies co-equal to the number of charitable institutions; hence a want of harmony and of order, which must be very injurious to the interests of the poor.

Every hospital, infirmary, and dispensary in London, is governed by a particular coterie, and each of these select bodies, besides being perfectly independent of all control, and unaccountable for its actions, is often prompted by selfish motives, and guided by principles of individual, not public interest. Hence the bickerings and quarrels which occur between neighbouring hospitals, as exemplified in the recent proceedings at the two endowed charities in the Borough; hence we find that one charitable institution becomes the jealous and determined rival of another, instead of seeing all working with unanimity and zeal in the cause of humanity; and hence, in some instances, the direction of enormous sums of money, and the administration of a vast establishment, fall into the hands of a single individual; while, on the contrary, the funds of other charitable institutions are wasted, their field of utility restricted, or their existence compromised, because, according to the proverb, "that which is everybody's business is nobody's business."

We shall not push this part of the parallel any further, although it might be developed to a much greater extent. We pass to another topic, viz., the regulations under which medical appointments are made to the Parisian hospitals, and the efficient manner in which medical aid is afforded to the sick poor who are received into those institutions. Here, again, we fear that the contrast will not bring to light much which is to the advantage of our own establishments.

The administration of the civil hospitals of Paris, afforded relief, during the year 1835, to no less than 70,452 house patients; it supplied support to 12,447 of the sick poor in the "hospices;" took charge of 21,288 foundling children, and 1676 orphans, and, moreover, gave medical assistance to 62,539 individuals at their own homes.

The whole of these duties were performed by the hospital physicians and surgeons, aided by a class of medical officers, called members of the *Bureau Central*. This latter forms part of a building, situate in a central part of the town, in which all patients desirous of obtaining relief at the hospitals are examined previously to their receiving a ticket of admission from the member in attendance; all accidents, however, and cases of evident emergency are received without this form being required.

The members of the *Bureau Central*, whether physicians or surgeons, are all chosen by public concours, and from them are supplied the ordinary medical officers of the hospitals, and other charitable institutions. This practice is so rigidly observed, that not long ago, when the French Government was desirous of appointing to some minor hospital a surgeon, who had not undergone the ordeal of a concours, the act produced an energetic and public protest from all the hospital physicians and surgeons, and was, we believe, recalled in consequence.

It is for the establishment of a similar principle in the administration of our hospitals, that we have ever contended with an earnestness of demand which the importance of the principle so fully justifies. It requires but a small degree of sagacity to perceive the immense impulse which the science of medicine would receive in this country, if the high and lucrative posts of medical officers to our public hospitals, instead of being given as a boon to some favoured relative, or made the prey of some designing intriguer, became the reward of scientific merit and practical experience alone.

We should then no longer witness the deplorable examples of ignorance and neglect which our public hospitals afford, at present, in such abundance; the surgeon elected by concours would not be likely to overlook the presence of a strangulated gut in a wound of the abdomen, nor would he, on the other hand, be so ignorant of the laws which govern life, as to destroy existence by the performance of successive operations on the same member, without any interval of time between them; the surgeon elected by concours would certainly possess sufficient dexterity to extract a stone from the bladder, and not lose himself amongst the abdominal viscera, or in the anus, as more than one "nepos" has done, on more than one occasion.

But enough of these disagreeable reminiscences; if our readers be inclined to multiply them, they will find more than an abundance of materials scattered throughout the pages of this Journal.

In addition to the surgeons and physicians who fulfil the ordinary duties of hospital practice, there are eight resident surgeons, denominated, "Chefs de Cliniques," who constantly attend in the hospitals devoted to clinical instruction. Every establishment for the reception of the sick-poor should be provided with one or more medical attendants of this class; and it is to be regretted that even a minority of the Parisian hospitals should be left without them; the principle, however, is recognised by the appointment of eight such officers, and this number, though considerably below that which the necessity of the service demands, bears a striking contrast with the absence of resident medical officers in the hospitals of the metropolis of the British empire.

The "Chefs de Cliniques" are named for four years; they are supported in the hospital, and receive a small annual allowance of five hundred francs. When will the miscalled governors of our charitable medical institutions adopt even this moderate improvement?

Thus far the parallel which we have drawn, exhibits, on the one side, a number of medical officers appointed to our hospitals by means of favour or intrigue, and, therefore, for the most part, incompetent; while, on the other side, it shows us a brilliant train of physicians and surgeons, not only zealous in the discharge of their duties, but labouring with success for the advancement of a science which they have cultivated as the sole means of obtaining honourable distinction.

If we descend to the subordinate medical attendants at hospitals, we find the same prominent characteristics which distinguish appointments in the two countries. *There*, place is obtained by merit;—*here*, by money, or by intrigue. Need we mention the base and sordid fashion of selling dresserships at our hospitals for certain sums of gold? It is notorious, that the office of dresser, which

embraces several important duties, and no small share of responsibility, may, in this country, be bought for fifty pounds sterling by the greatest dunderhead that ever disgraced a liberal and enlightened calling. The comforts, the health, nay, for aught we know, the lives, of the wretched inmates of hospitals are thus bartered for gold. Well did the poet exclaim,—"Auri sacra fames;" for, assuredly, of all passions the basest and most contemptible is that of avarice. It is evident that under a proper system of government, the power of submitting the sick-poor to experiment for the purpose of acquiring a pretension to superior knowledge, would never be ceded to any set of individuals in exchange for money. How different is the conduct pursued by the body of intelligent men under whose administration are placed the Parisian hospitals. A brief account of the manner in which "Dressers" are appointed to the latter-named institutions may not be unacceptable to some of our readers, although to most of them the names of "Externe" and "Interne" must be familiar.

The "Interne" of a Parisian hospital is chosen for four years, by concours. His duty is pretty nearly the same as that of a "Dresser" in one of the London Hospitals; he sees that all the ordinances of the medical officer are punctually obeyed; attends all cases of emergency during the absence of the surgeon; is bound to visit the wards which are placed under his care once every afternoon, and to keep an exact history of all the cases treated under his charge. The "Internes" attached to each hospital are, moreover, obliged to "be on guard," as the term is, each for 24 hours, in turn; and this provision supplies, though imperfectly, we must admit, the want of resident surgeons. The "Internes" are well lodged and fed at the expense of the hospital, and receive, each, an annual allowance of from four to five hundred francs.

The remarks which we made awhile ago, in reference to the appointment of surgeons nd physicians to hospitals, apply with still greater force to the nomination of dressers and internes. The dresser *buys* his office—the interne *wins* it by merit. This fact speaks volumes. We leave the contrast which it affords without comment, lest we should diminish its force by dilution.

The last topic upon which we propose to touch is one of a financial nature. The number of patients received into the fourteen civil hospitals of Paris, during the year 1835, was, as we have before stated, 70,152: this is exclusive of out-patients. The expenses of these establishments, during the same year, were about 3,000,000 of francs, or £120,000. Thus, at the moderate expenditure of £120,000 sterling, no less than fourteen magnificent hospitals were supported during the space of one year, an immense field was afforded for medical instruction, and the sufferings of more than 70,000 human beings were alleviated. This is a bright and pleasing picture, and shows to what an extent humanity might be benefitted in this country were the funds of our charitable institutions administered by a competent body of responsible individuals. How few, even of those who devote some attention to medical affairs, are aware of the fact, that the hospitals of *Guy* and *St. Thomas* consume annually a sum of money nearly equal to the annual expenditure of all the Parisian hospitals put together! A circumstance of such importance as this cannot be unworthy of the attention of the Legislature.

Practical Surgery; with one hundred and twenty Engravings on Wood. *By* ROBERT LISTON, *Surgeon*. London, J. Churchill and H. Renshaw. 1837. 8vo. pp. 491.

IT is by no means easy to "review," as the technical phrase goes, a work similar in character and in execution, to the one which now lies before us. Mr. Liston should have adopted, as a motto for his "Practical Surgery," the celebrated saying of the Cardinal Wolsey,—"Ego et rex meus;"—"Myself and my Catlin,"—for the present volume is a brief but faithful outline of all that Mr. Liston's mind has imagined for the advancement of the science of sur-

gery, and all that his hand has executed during a long and brilliant practice of the art. If this renders the work peculiarly valuable in one point of view, it is calculated to diminish its utility in another; for the experience of no single man can be sufficient to embrace all the facts which relate to the very extensive field of surgery. This remark, however, applies rather to *practical* than to *operative* surgery. The latter may be embraced, almost completely, in the experience of one individual, and it is with pleasure that we perceive that the surgeon who, above all others, is well calculated to execute the task, has undertaken to lay before the profession "a plain, common-sense view of the most important injuries and diseases which are met with in practice," and of the operative means which are most commonly employed in their treatment.

We fully agree with Mr. Liston in his opinion, that the art of operating has been too lightly considered, and too little practised on the dead body, even by many surgeons who occupy prominent situations in the profession. Of this, unfortunately, we have very frequent experience in the wards of our hospitals, where want of dexterity in the use of instruments, and, indeed, absolute incapacity for the performance even of simple operations, may be daily observed. The persons to whom Nature has thus denied the efficient use of their hands, affect to despise the art of operating, because they can never hope to attain eminence by their own performances, and therefore endeavour, either by ridicule, or the misrepresentation of facts, to diminish the importance of one of the most useful qualifications of a surgeon. Accuracy of diagnosis is certainly an essential point in the practice of surgery, and it is also necessary that what is called the "after treatment" of disease should be directed in a skilful and scientific manner; but we cannot avoid thinking, that in the majority of surgical cases which require an operation, the point of most importance is this,—that the operation should be performed rapidly and scientifically, without waste of time, and consequent increase of suffering to the patient, and in a way which is best calculated to promote a speedy recovery. It is ridiculous for the surgeon to vaunt himself on an accurate knowledge of the best methods of treatment after the performance of any surgical operation, unless he be capable of executing the operation efficiently. It is evident, for example, in cases of urinary calculi, that unless the extraction of the stone be performed according to certain well-known rules, the after treatment will be of little avail. What can medical care effect if the operator be unable even to find his way into the bladder,—or if he divide some important vessel, and allow the patient to bleed to death,—or if, in amputating a limb, he do not leave sufficient soft parts to cover the stump,—or if, in cases of stricture, he bore a hole through the urethra, and keep working his catheter amongst the patient's bowels? We do not mean to underrate the value of medical knowledge to the operator, but we believe that the difficulties of the after treatment in many surgical complaints are greatly increased by the bungling mode in which operations are performed for the removal of disease; and we have sufficient confidence in the powers of Nature to predict, that if such operations were performed at the proper time, and in a proper manner, the most simple treatment would suffice to conduct the case to a happy termination.

But we have wandered a little from the immediate subject of our article, namely, Mr. Liston's work. The reader is not to expect in this volume a systematic treatise on operative surgery, in which are described all the methods proposed or practised by English and continental surgeons, for the relief of accidents, or the cure of disease. Mr. Liston has judged correctly in not swelling his book to an enormous size, by giving descriptions of things which ought long since to have been banished from the practice of surgery, or by entering deeply into the therapeutical part of the art. He has, with advantage to his readers, preferred giving a brief but plain account of the various operations which he is accustomed to perform himself, and of the simple but efficacious methods of treatment which he formerly employed at the *Edinburgh Infirmary*, and still continues to practise in the *University College Hospital*, in London.

The work is divided into sixteen chapters; the first and second comprehend all matters which are connected with first incisions, the opening of abscesses, the union and dressing of wounds, &c. Here will be found some plain observations, which every stu-

dent may comprehend, and which he will find, by experience, to be of a perfectly practical nature. Mr. Liston recommends that the divided surfaces, after amputations, should not be immediately brought into contact, but that sufficient time should be allowed for the blood, which continues oozing from the divided surfaces for a few hours, to escape. This is a point of practice upon which the late Baron Dupuytren used to insist with a great deal of force. The dressings used by Mr. Liston are of the most simple and unirritating nature, and he seems to employ frequent "water-dressings," as a means of alleviating extreme sensibility, moderating the oozing of blood, and diminishing the chances of subsequent hæmorrhage. The whole of this, and of the preceding chapter is written in strict accordance with the best principles of surgery. There is, however, one point upon which we cannot help differing from Mr. Liston. At page 32, the suture is mentioned amongst the ordinary means of adjusting and keeping together the edges of a wound during the first period, and this in a manner which would lead the reader to conclude that Mr. Liston employs it on most occasions after amputations. We cannot reconcile this with the general simplicity of our author's practice, and with his love of unirritating applications, and we think that it would have been useful had he pointed out under what circumstances the use of the interrupted suture should be applied to the treatment of wounds.

Chapters, from three to seven, inclusive, comprehend the subjects of injuries and diseases of bones and joints; injuries of muscles and tendons; injuries and diseases of blood vessels; and injuries and diseases of integument and cellular tissue. Then follow the topics of restoration of lost parts; morbid growths and enlargements; amputations; injuries and diseases of mucous and serous cavities and canals; diseases of the genito-urinary organs; hernia; and, finally, congenital deformities and deficiencies.

It is not our intention to follow Mr. Liston through each of these chapters; and were we to reprint the *original* observations which they contain, we should have to extract the greater part of each chapter. The dissertations on diseases of the joints, and on amputations, are well worthy of attention; but the ninth chapter, in which morbid growths and enlargements are described, seems to us to be decidedly the most valuable and the best written of the whole. In this chapter Mr. Liston treats of tumours of the scalp; of the eyelids; the orbit; the tongue and the mouth; the antrum; the lower jaw and the neck; of erectile tumours, and the operations which they require; of tumours of the trunk, the shoulder, the scrotum, the patella, the lower extremity, and the great toe; of the bones and the nerves. We regret that we can only find room for the following extract, in which the difference between malignant and non-malignant tumours of the jaws are pointed out.

"The morbid growths which involve the superior and inferior maxillary bones are, as might be expected, of various kinds, and their structure and disposition apparently depend somewhat upon the tissue from which they have originally sprung, as the gum, membranes of the teeth, periosteum of the alveoli, the surface or internal structure of the bone, or the membranous lining of their cavities. The most frightful tumours affecting these parts, which I have witnessed, have commenced in some of the neighbouring tissues. I have repeatedly seen malignant tumour of the lower jaw, to the bulk of which it had so far contributed, and which had, on reviewing its history and progress, without doubt, commenced in the soft parts; the upper jaw, it is well known, is involved at an early period in the malignant degeneration of the contents of the orbit, or of the mucous linings of the ethmoid and other cells. Very many of the tumours of the jaws are traceable to faulty growth or position of the teeth, to disease of their bodies, or to improperly-conducted operations upon them. The tumour of the gum, epulis, is often a simple growth of the consistence of the structure from which it proceeds, and not likely to be reproduced if the exciting cause is removed, and the entire disease extirpated; the cause is decay of some part of one or more teeth, of the crown, neck, or fang, or it may arise from their being crowded and displaced. The lower jaw is the most common situation of epulis; it appears in front of the mouth, occasionally at the root of the molares, and the upper jaw is by no means exempt from it.

"The tumour of the gum is of slow growth; it remains generally of the same firm consistence, and its attachments are broad and firm; its surface even when large is covered by membrane, is unbroken, it becomes lobulated unless it projects from the mouth, and is exposed to injury; the teeth are loosened and present in various

parts of the tumour; around their base some excitement may be kept up, and even some ulceration and discharge. The tumour is not of a malignant nature in general, and even in its advanced stages is not inclined to contaminate the parts in its neighbourhood; if thoroughly removed it does not return. A soft tumour of the gum, rapid in its progress, broken on its surface, and furnishing fetid and bloody discharge, is sometimes, it is said, met with; there is no danger of mistaking the one kind for the other, the remediable for the malignant; fortunately the latter is rare. I cannot recall to my recollection any case that I have seen of decidedly malignant disease springing from the gum.

"But, unfortunately, the maxillary antrum is more frequently the seat of a soft, brain-like and malignant mass, than of a chronic collection of fluid. No age or sex is exempt from it; and when it has fairly declared itself and has begun to appear through the parietes at any point, it is irremediable by any known means. This disease seems sometimes to be connected with the soft tumour which grows from the apex of a tooth and from the investing membrane, the periosteum of the fang. Generally, however, it originates in the degeneration of the mucous membrane lining the cavity, which it rapidly fills. In the first stage, which may exist for some months, the cheek is prominent and bulging; it has the same smooth appearance as is presented by the chronic fluid-swelling, and the integument is, for a time, as loose and free from infiltration. The parietes are hard and unyielding, but a softened part may perhaps be detected in the palate, cheek, or towards the tuberous process; this yields to the finger, and affords a pulpy feel; the same elasticity, as described in speaking of fluid tumour, is not perceived. Some considerable time may elapse before the tumour bursts through the parietes, and, before it does so, it has generally pushed its attachments backwards, has filled the cell of the palate bone, has involved or contaminated the lining membrane of the ethmoid cells, and, perhaps, even that lining the sphenoidal sinuses. The patient has all this time suffered a dull uneasy feeling in the cheek, a sensation of fulness and distention. He then begins to find the corresponding nostril obstructed, and, perhaps, then only applies for advice. The cavity will, on examination, be found occupied by a soft mass, irregular or easily lacerable on its surface, when broken furnishing blood, and, at all times, a copious sanious discharge. After having burst through the parietes of the cavity in one direction its progress is rapid and uncontrollable. Portions may be removed by the knife, ligature, or cautery, potential or actual, but the onward course of the tumour is continued. The teeth become loosened and fall out, the tuberous process is bulged backwards, the eye is found protruded, in the advanced stages, upwards and forwards; soft fungous masses, sometimes bleeding profusely without external injury, show themselves, to a frightful and disgusting extent, in the mouth, throat, and orbit, the features are terribly distorted, the patient becomes hectic, and dies very miserably. In the very earliest stages of this disease, before there is reason to suppose that it has extended much backwards, it may perhaps be warrantable to attempt its entire extirpation, and thus afford the patient the only chance of escape from so certain and miserable a termination. The opening of the cavity and the attempt to clear it of the soft pulpy mass which occupies it, as formerly practised, is totally inadmissible; it is a piece of unmeaning and utterly useless cruelty. If anything is to be done it ought to be set about with a thorough determination to go beyond the limits of the morbid growth, to remove the cavity which holds it, and thus get quit, if possible, of all the tissues implicated, or which may have become disposed to take on a similar action. I know from experience that this step, if adopted in time, may prove successful; but it is at least a doubtful and a very severe proceeding, not by any means unattended with danger; it is, however, the only remedy."

The extract which we have just given will enable our readers to form but an imperfect notion of Mr. Liston's work. Almost every page abounds in matter which is equally interesting to the surgeon, and necessary to be known by the student. Every remark has a practical tendency. This is the distinguishing characteristic of the work,—a quality by which it is raised infinitely above any similar volume treating on the same subjects in the English language. The only reproach which we feel inclined to make to Mr. Liston, is that of his seeming to underrate the difficulties of most operations, and the want of a sufficiently minute description of the manual part of each particular step in operations. This, however, we can more readily pardon in Mr. Liston than in any other surgeon; he naturally thinks lightly of the formidable operations which, under his dexterous hands, are performed with the utmost rapidity and security, and imagines that a process which is so easy to himself must be understood, without difficulty, by all his readers. We believe that it would have been more prudent to suppose the reader to be comparatively ignorant, and to have led him on,

step by step, from the first incision into the skin, to the termination of the operation.

We have already expressed an opinion of the work in terms which sufficiently indicate our high estimation of its value, as a treatise on practical surgery. It is now our duty to mention a few omissions which Mr. Liston will, without doubt, rectify in a subsequent edition.

The operation of amputation at the hipjoint is mentioned only in an incidental manner. It certainly deserved, not only a separate and detailed description, but an accompanying woodcut; and this omission is the more extraordinary, as the skill and dexterity of the author in amputations at the hipjoint, have been the subjects of general admiration. The chapter on the restoration of lost parts is rather meagre; the author might certainly have referred to some of Professor Dieffenbach's processes with advantage. The treatment of artificial anus is barely noticed, and the utility of the enterotome, is, we think, much underrated in the work. Mr. Liston considers the operation of lithotrity as being inapplicable to children. "The operation of *lithotomy* (says Mr. L.) must yet continue to be performed on children, and on those of mature age, who are so ill-informed, or so foolish, as to permit the stone to attain an inordinate bulk." The numerous operations, however, performed by Leroy d'Etiolles, and Segalas, sufficiently demonstrate the practicability of breaking up calculi in the bladder of the child, even when the patient is under the age of twelve months.

We should not omit to notice the numerous woodcuts by which the different amputations, and various diseases, are illustrated. These cuts are abundant in number, and well executed, and the subjects are chosen with discrimination. We observe that one of them (page 168) has accidentally been inserted upside down, and presents an appearance which might embarrass the young student.

As a standard work on practical surgery, the volume of Mr. Liston is admirably calculated to aid the student in his pursuits, and the young practitioner in the performance of the daily duties of his profession.

The Medical Pocket-Book and Almanac for 1838. By JOHN FOOTE, *jun.* London: Renshaw.

THIS little compendium is an improvement on the digest of last year, and contains much useful information. Its contents will not be burthensome to the memory, nor its size to the pocket. It is a volume of reference upon subjects that interest the medical man, and, if it has no great pretensions as a literary work, it has some claims on the score of its usefulness. The Almanac will be found serviceable to those who attend the medical and scientific societies, the evenings and the hours of meeting being daily noticed. The information which it contains on sundry matters connected with the medical institutions is intelligibly and correctly given, and the points of reference in the New Pharmacopœia, with the succinct account of the remedies which have been introduced into practice, either in this country, or on the Continent, during the last year, will render the Pocket-book of service to those who require such a monitor. A formulary of useful prescriptions, of the latest date, taken from some experienced practitioners, makes it useful to students.

WESTMINSTER MEDICAL SOCIETY.

Saturday, November 18, 1837.

MR. HALE THOMSON, President.

MR. EVERITT ON THE PRESENCE OF ARSENIOUS ACID IN CANDLES AND FATTY MATTER.

THIS evening was chiefly occupied by an interesting lecture by Mr. Everitt, in which he detailed the means used by him for detecting the presence of arsenious acid in fatty matter, and communicated the results of some researches he had made relative to this subject. The lecture, which was illustrated by many experiments, and attended by a larger number of members and visitors than any meeting during the session, was more than usually interesting. The lecturer said, in commencing, that for the purpose of rendering his views and experiments clearer, he should divide the subject into three heads. The first was

The Method of detecting the presence of Arsenious Acid in Fatty Matter.

Mr. Everitt said, that, after many trials, the details of which would not interest the Society, he was induced to recommend the following means for demonstrating the existence or non-existence of arsenious acid in

fatty matter, as being simple and easy of execution, and, at the same time, highly satisfactory in their results:—Let any quantity of the suspected matter, say one ounce, be taken and boiled with four or five times its weight of distilled water for one hour; then, let the water and the melted fat, while hot, be decanted into a clean porcelain basin, and allowed to cool without disturbance. When the fat has consolidated it can be removed in one piece from the surface of the water, which water, if the fat contained any arsenious acid, will hold it in solution, and it may be detected by the well-known agents employed for that purpose. Some liquid which had been obtained in this way from candle-fat, was divided into three portions, which were tested by the silver, copper, and sulphuretted hydrogen tests, which acted characteristically; and a piece of orpiment, previously obtained from the same source, was reduced to the state of metal in the usual way. Mr. Everitt secondly demonstrated

The Method adopted for determining the Absolute Quantity of the Poison.

For this purpose 300 grains of the suspected fat is to be boiled with 2000 grains of distilled water for one hour, decanted, and allowed to cool as before; the cake of fat is again to be broken up and boiled with 1000 grains more of fresh distilled water, cooled, and the cake again removed; to the two liquids thus obtained, when mixed and quite cold, add a few drops of hydrochloric acid, and pass a stream of sulphuretted hydrogen gas, so as to precipitate all the arsenic as orpiment; it is safe to have an intermediate bottle containing a little water, between the flask generating the gas and the vessel containing the liquid to be operated on, so as to wash the gas, and prevent any accidental boiling over of the contents of the flask, disarranging the experiments. The solution, after standing some time, is then to be boiled, in order to drive off all excess of sulphuretted hydrogen, which tends to retain a small portion of orpiment in solution. After boiling this will appear as a curdy bright yellow precipitate, floating in the clear colourless liquid. In order to estimate its weight accurately, a filter of the proper size is to be dried at 212°, and weighed out of contact of air (Mr. E. weighed it in a thin silver case), to prevent the hygroscopic power of the paper increasing its weight during the weighing process. This paper is then to be used for filtering the whole of the liquid, and collecting the orpiment; and after heating again to 212°, till it is quite dry, which is to be known by successive weighings, as before, until the two last are alike,—the difference gives of course the quantity of precipitate; and as 124 grains of orpiment correspond with 100 of arsenious acid, it then becomes a matter of calculation. Two other precautions are, however, necessary to be taken; first, to see that the fluid which passes the filter retains no more arsenious acid, by passing into it a little more sulphuretted hydrogen; it should not become in the slightest degree yellow; next, to see if the collected precipitate be soluble in ammonia, which, if it is only orpiment, will be the case, but if, after passing the stream of sulphuretted hydrogen through the solution, it be allowed to remain long before it be boiled, to drive off the excess of gas, a little sulphur is liable to fall down with the orpiment, and increase its apparent weight; but as sulphur is not soluble in ammonia, and the orpiment is, the extent of this source of error can be estimated and allowed for. In order to know if this mode of treating the fat removed all trace of arsenious acid, a portion which did contain it, and which had been boiled twice with water, was melted in a shallow cup, and burnt by a floating wick, and the condensible products of the combustion collected and tested, which in no case gave any indication of the presence of arsenious acid. By these means Mr. E. had examined a great many samples of the so-called German wax, or stearine composition candles, and found the quantity of arsenious acid to vary from 10 grains to 18 grains in the pound weight of candles. Thirdly,

The method of determining in what Form the Arsenic leaves the Candles during their Burning.

In order to ascertain this point, the hot air, and all the products of combustion of a candle containing arsenious acid, were forced to pass up a glass bulb, and along the interior of a glass tube, eighteen inches long and one inch wide, which was kept cool by a bandage of cloth on the outside constantly moistened by water; by this contrivance a quantity of water was collected in the tube, tested, and found to contain arsenious acid, and a small quantity of a white sublimate was collected in that part of the condenser immediately over the candle, and which proved to be solid arsenious acid. In order that no smoke may mix with the products, the wick of the candle must be kept quite short, and all agitation of the air prevented by surrounding the flame with some sort of a screen.

Mr. E. stated it as his belief, that nearly all the arsenious acid thus found in fat, is in a state of simple mixture; for, on trying the quantity contained in different candles of the same parcel, different quantities were found; and that, on trying 300 grains from the top of the candle, and 300 grains from the bottom, one half more arsenious acid was found in the former than in the latter case, which he accounted for by supposing, that when the melted fat is poured into the mould (the bottom of the mould

corresponding with the top of the candle), during the time it takes to cool, a tendency of the heavy ingredient to fall might cause this difference; and, further, by boiling some stearic acid with two per cent. of finely powdered arsenious acid for two hours, and then allowing the fat to pass a filter kept hot, this fat was found to contain a mere trace of arsenious acid, not more than one grain to a pound; the rest remained on the filter. This fact is, to some extent, important, since although the average quantity added to a given weight of fat may, perhaps, not be injurious, still, as its uniform diffusion through the mass depends solely on the care of the workmen, not on the solvent quality of the fat, one parcel of candles may contain so large a proportion of this substance, as to make it dangerous to use them, a contingency which the use of this substance to any extent, however small, it is impossible to guard against, and ought to be a strong objection to its use as an article of consumption.

Mr. Phillips and Mr. G. Bird bore their testimony to the accuracy of Mr. Everitt's experiments.

A desultory discussion followed, as to the course the Society ought to pursue in the matter, which determined eventually in leaving the affair to the Committee, whose report on the subject is anxiously looked for.

MEDICAL SOCIETY OF LONDON, Nov. 20th.—The proceedings of the Society this evening, again, are blank in the annals of reporting. The proceedings were exclusively those of the internal business of the Society, as may be judged from the following notice in the book for entering the names of members, &c.:—"No visitors or reporters admitted this evening!"

MR. MILLER ON EMBRYOLOGY.

To the Editor of THE LANCET.

SIR:—I beg to return you, as well as to the Editors of the other weekly medical journals, my grateful thanks, for the insertion of my paper on Human Embryology. I observe in the same number of your Journal, a report of a late meeting of the *Academy of Sciences* of Paris, in which the discovery of a vesicula umbilicalis in the kangaroo is announced by Mr. Owen.

Having traversed the same grounds at M. Coste and Mr. Owen, and dissected not only the embryos of kangaroos, but of most of the herbivorous and carnivorous animals, the preparations of which are in my possession, and have been seen by a large number of the profession in this kingdom, I now call on M. Coste and Mr. Owen to determine, from preparations made by themselves, the following points:—

1st. Where does the duct, from the vesicula umbilicalis in the kangaroo, and in herbivorous and carnivorous animals, terminate in the intestinal canal?

2nd. Where do the omphalo-mesenteric artery and vein commence and terminate in both classes of animals?

I shall give them three weeks from this time to answer these questions, and should they fail to come forward, I shall then do so, and supply you and the other journals with engravings of my dissections.

This is only a small part of my researches on comparative and human embryology, all of which I shall shortly publish in an original work; but as many medical gentlemen have urged me to explain my views on the anatomy and physiology of the placenta, and on the prevention of uterine hemorrhage, I shall comply with their request as early as possible. I am, Sir, your obedient servant,

JOHN MILLER, Mechanic.

3, Theobald's-road, Nov. 20, 1837.

DR. DICKSON AND DR. JOHNSON.

To the Editor of THE LANCET.

SIR:—When Dr. James Johnson in his "review" of my recent work on medicine, travelled out of the path of justifiable criticism, to accuse me—falsely as I have proved—of *depleting my patients' purses*, was he not guilty of gross and illiberal *personality*? When he seized, moreover, upon a passing remark in a foot-note to one of my pages, mentioning the number of patients treated by me in a given time, *by a method fully and fairly stated*, and *thereupon* founded against me a charge of quackery (!) could he be actuated by any other motive than a feeling of personal spleen or hostility? The simple expression of my want of faith in the stethoscope, as an instrument of diagnosis, affords my critic a fresh opportunity of gratifying his vituperative disposition. Disingenuously suppressing my explanation that the indications obtained through its means were too often neutralised by the alarm of the patient during its application, he fastens upon me a charge of "profound ignorance and inveterate prejudice!" Yet, in a recent number of THE LANCET, I find this very Dr. James Johnson expressing himself, with regard to the stethoscope, in the following manner, when speaking of the mistreatment of heart diseases—the subject which called

forth my own opinion of its worthlessness:—"It was a common error of young practitioners to consider the heart as organically diseased when its function only was much interfered with—and this error had become more general, he was sorry to say, *since the stethoscope came into use.*" Again, having made me commit the palpable absurdity of saying that "ulcers, abscesses, &c. were all remittent fevers!" instead of quoting my own expression, which is, "developments in the course of remittent fever," he has the presumption to accuse me of "madness with a method in it;" and he winds up his tissue of abuse by a statement—false, as my bookseller can testify—accusing me of gratuitously distributing my publication among my private patients; and that to the amount of *three thousand* copies annually! Now, I ask my critic,—I ask you, Mr. Editor, as a gentleman and a journalist, is this criticism? or is it gross personal insult based upon literary misrepresentation and dishonesty?

I have only in conclusion to notice Dr. Johnson's statement of his having received an anonymous letter with the Cheltenham post mark. Dr. Johnson finds it suitable for his purpose to insinuate that I am the author of that letter; but to those who know my nature and my character I do not require, at this hour, to rebut such an insinuation with my flat and indignant contradiction. * * * *

With Dr. Johnson I never had a quarrel previous to his published attack upon me. To this hour I am ignorant of his person. Had I been equally unacquainted with his writings it would have been better for some of my earlier patients. But had he not attacked my private character, I should have left the proofs of the destructive tendency of his lucubrations to time, which, sooner or later, awards to every man his proper appreciation as a writer. I am, Sir, your most obedient servant,

S. Dickson.

Cheltenham, Nov. 13, 1837.

[We have thought it right to omit more than half of Dr. Dickson's letter. The portion now inserted must close the correspondence on the disagreeable subject to which it relates.—Ed. L.]

MR. HUNT ON ARSENICAL CANDLES.

To the Editor of The Lancet.

Sir:—Perceiving, from the report of the proceedings of the *Westminster Medical Society*, which appears in The Lancet of the 4th ult., that the important question of the injurious tendency, or otherwise, of the use of arsenic in the composition of candles, was brought before its members, and a question raised as to the state in which the arsenic would be after combustion, I trouble you with a few remarks, the result of a great number of experiments, proving, most conclusively, that Arsenious acid, or, as it is commonly called, White Oxide of Arsenic, is thrown into the air, in a finely divided state, by the burning of the arseniuretted, or,—as they may with propriety be called,—Corpse-candles.

Although carbonaceous fluxes are used for reducing white arsenic to a metallic form, it will be apparent, when we remember the action of gas in a natant state, on the oxides of this metal, that the reduction is entirely prevented, in this instance, from the deoxidation of the arsenic, by the carburetted-hydrogen formed during the decomposition of the stearine, in the capillary vessels of the wick, and their consequent combination in the form of arsenio-carburetted hydrogen.

Decomposition is again effected, during the process of combustion; the carburetted hydrogen forming, with the oxygen of the air, carbonic acid and water, whilst some carbon is set free; and the liberated arsenic is again converted into its oxide.

This may be convincingly shown, by holding over the flame of one of these candles, a glass tube, at an angle of thirty degrees. Carbonaceous matter will be seen to fly off, and be deposited around the upper orifice of tube. Below this, a crust of the white oxide of arsenic will be formed, and, at the point on which the flame impinges, a little metallic arsenic will present itself, which, as the tube becomes heated, sublimes, and is also converted into arsenious acid.

By this easy experiment, the quantity of arsenic used in the composition of the candle, may be ascertained with considerable precision. By closing the ends of the tube, the carbonaceous matter may be used as the deoxidizing agent; and on applying the heat of a spirit lamp, the whole of the pure metal can be sublimed to any convenient part of the glass.

A short period since, having occasion to well light a large apartment, I used some spermaceti candles, recommended to *me* for the purpose. During the evening the air of the room became exceedingly oppressive, and several persons were distressed with an irritating cough. Suspecting the candles, I submitted them to analysis.

One of them yielded me 160 cubic inches of arsenio-carburetted hydrogen gas, from which I obtained 27 grains of arsenious acid.

Surely the advantages of a good appearance are not so great as to warrant a continuance of this evil practice, by which a very useful article is converted into a deadly and insiduous destroyer. I have the honour to be, Sir, your's &c., Robert Hunt.

London, Nov. 5, 1837.

ST. GEORGE'S HOSPITAL.

ANASARCA.—LARYNGITIS.

FRANCIS MATTHEWS, aged 28, was admitted under Dr. Seymour's care, with a general anarsarcous state of the inferior extremities. He complains of no pain in the loins, and was ordered *castor oil*, half an ounce, *in peppermint water*, on the morning after his admission.

June 16. He passes an abundant quantity of urine, which is of a pale straw colour, and coagulates strongly on the addition of nitric acid, proving the presence of albumen. He was ordered to go into the warm bath every other day, to be cupped in the loins to twelve ounces, and to take *a saline draught, with Dover's powder*, every night.

20. He has made nine pints of urine in the twenty-four hours, and the anasarca is rapidly subsiding. He was ordered half an ounce of *bitartrate of potassa* every other morning early.

22. The urine is not passed so freely, only five pints being passed in the twenty-four hours. The warm bath to be used twice a week only.

24. He has a slight cough, with copious perspiration and expectoration, but complains of no pain in the chest, or in any other part of the body. The urine has decreased to three pints in the twenty-four hours; the bath was ordered to be omitted.

26. The anasarca has much subsided; the urine remains the same in quantity; the cough and mucous expectoration are undiminished, for the relief of which a blister was ordered to the chest. He was put on ordinary diet without beer.

28. Much the same as at the last report; the poor man still complains sadly of cough and pain of the chest, which still remains the same as before, owing to the sub-assistant-apothecary's deputy dispenser having sent up from "the shop" an *opium plaster* instead of a *Spanish fly* one. A suitable clinical reprimand was prescribed for the stupid functionary, and a blister again ordered for the patient.

July 3. The cough and expectoration are undiminished; the throat is hoarse, and the stethescope detects the *râle muqueux* in the bronchial cavities. He has been troubled with much sickness and nausea lately. Dr. Seymour ordered him to take three grains of *sulphate of quinine*, three times daily, for the general weakness and debility under which he laboured, and for the relief of the cough, a *spermaceti draught with laudanum*.

7. He is somewhat improved in strength, but the cough and pain in the chest are still troublesome, for the further relief of which (as none had yet been obtained) a *mustard poultice* was ordered to the chest for quarter of an hour, and five grains of *extract of conium* every four hours, with the following draught, the use of which it would be difficult to determine:—

Simple syrup, one drachm;
Cinnamon-water, half an ounce;
Lime-water, one ounce.

Milk and arrow-root ordered for diet.

8. To-day the apothecary believes him to be better, and Dr. Seymour, acting on the on the principle of variety and antagonization, ordered the alkaline draught to be discontinued, and *lemonade* and *arrowroot with lemon juice* to be taken instead.

10. There has been much vomiting for the last twenty-four hours, which every fit of coughing has increased. The larynx is swollen and puffy externally, and very painful on pressure. The superior margin of the pharynx, velum palati, and tonsils, are red and inflamed; the mucous expectoration is decreased in quantity. Dr. Seymour finding now that the case was one demanding prompt measures and energetic treatment, ordered *chloride of mercury*, three grains; *opium*, one grain every four hours, with *effervescing saline draught* after every pill. *Twelve leeches* to be applied to the throat, and a *poultice* afterwards.

12. The vomiting still remains almost constant, the fauces feel hot and burning. Bowels open, pulse weak. Voice very hoarse, harsh, and indistinct, diagnosticating much inflammatory congestion, and thickening of the laryngeal tubes and air-passages. The *calomel* was discontinued, and the following draught was ordered, to keep the sickness in check:—*Sulphate of magnesia*, one scruple; *burnt magnesia*, ten grains; *tincture of opium*, three minims; *peppermint water*, ten drachms, every four hours.

13. Sickness better; pulse 100, moderately strong; affection of the throat the same; purulent expectoration decreased. A *small blister* was ordered to be applied on each side of the larynx, and jelly ordered for diet.

15. Sickness is better; complains of some abdominal pain, with tenesmus; bowels relaxed. He was ordered a *domestic* (!) *enema*, and one pint of beef-tea daily.

17. He is evidently worse to day; there is great difficulty of articulation and utterance; the tongue is furred and glazed; stomach still remains very irritable; pulse 84, and weak. He was ordered *hydrocyanic acid*, two minims; *almond emulsion*, ten drachms; *syrup of poppies*, one drachm, three times daily.

19. Since the last report he has had ten leeches applied to the external surface of the larynx and trachea, without, however, affording much relief. The vomiting remains the same in frequency, and within the last few hours he has brought up portions of dark, ash-coloured slough from the lining membrane of the throat. Pulse 106,

and of tolerable strength. Ordered a mutton chop for diet; a blister to the epigastrium; a domestic enema; and twelve ounces of blood to be drawn from the arm.

20. He has had no vomiting since the bleeding; the blood is buffed and cupped; pulse 100, and regular; tongue less red; complains much of thirst. Medicines to be discontinued, and soda-water and milk, in equal parts, ordered for common drink.

21. The vomiting is much less, but the bowels are becoming weakened, and he has a most profuse diarrhœa; pulse very low. He was ordered *black pepper*, twenty-five grains; *tincture of opium*, twenty-five drops; *water*, ten drachms. To be taken directly; repeated in four hours, and again in six hours. The soda water and milk to be continued.

22. He died in the afternoon.

Autopsy twenty-four hours after death.

The entire upper surfaces of the larynx and trachea were covered with spots of purulent deposit, whilst the lining membranes were thickened and minutely injected. The apex of each lung was studded with vomicæ, filled with fluid, and surrounded by tubercular depositions; this appearance extended through a larger portion of the left lung than the right; the inferior borders of each lung were apparently free from disease. The lining membrane of the greater curvature of the stomach was dark, with a congested net-work of blood vessels. Both kidneys were in a state of hypertrophy, inflamed and granulated in their internal textures, presenting the common appearances of that state of diseased structure denominated Bright's kidney.

DYSENTERY.

John Williams, aged 30. He states that he has had dysentery for the last fortnight. Pulse 110, very weak; the fæcal evacuations are passed frequently, and almost unconsciously, consisting of bloody slime and fæcal matter intermixed; there is much pain on pressing over the abdominal surface, with a sensation of intestinal obstruction; the tongue is white and moist. He was ordered *chloride of mercury*, three grains, *opium*, one grain, in a pill, to be taken directly, and repeated at bedtime. Two drachms of *castor-oil in peppermint-water* to be taken early on the following morning. A *blister* to be applied over the abdomen. Beef-tea twice daily.

June 22. Last night he passed a large quantity of mucus and blood by stool, which has again occurred this morning several times. Pulse 100, stronger; tongue white; no tenesmus. Medicines to be continued.

23. He has less pain in passing the evacuations, which are not tinged with blood. Pulse 128, weak; skin cool; tongue furred and yellow; complains much of weakness. A *starch injection*, with half a drachm of *laudanum*, was ordered to be administered, immediately.

24. He complains to-day of a general sense of soreness over the whole abdominal surface. Stools bilious, but without blood. There is some slight eruption of purpura hæmorrhagica. Ordered *mercury with chalk* and *Dover's powder*, of each five grains, twice daily, and two drachms of *castor-oil*, *in peppermint-water*, to be taken early every other morning.

26. He has vomited a large quantity of greenish matter from the stomach, and has passed a stool of much feculent matter, mixed with blood. He was ordered *chalk mixture*, one ounce and a half, *tincture of opium*, six minims, three times daily. *Castor-oil* to be continued as before.

28. Stools have improved in quantity and quality. Ordered to have beef-tea and fish diet.

July 1. The stools are loose and offensive, immersed either with blood or mucus. *Mercury with chalk* and *Dover's powder*, of each five grains, three times daily; *castor-oil* early every other morning. Beef-tea to be taken for diet.

2. Complains very much of weakness and debility. The medicines to be continued. Half an ounce of *port wine* to be taken occasionally in the day, and a *saline effervescing draught* with *carbonate of ammonia*, every six hours.

3. The stomach is very irritable, and there has been much vomiting since yesterday. The dejections still remain very fœtid, but bloodless. Some slight purpureous spots are seen on the skin. He complains of great weakness. Pulse 100, and weak. Medicines to be continued. To take a jelly in addition to his other diet. A *mustard poultice* over the epigastrium for one quarter of an hour.

4. The vomiting has scarcely decreased. Equal parts of *milk* and *lime-water* for common drink.

5. He has had no vomiting since yesterday. Tongue moist; bowels confined. Ordered to take beef-tea, if possible, to remedy the latter inconvenience.

6. He passed some blood, by stool, last night, unconsciously, but he has had no vomiting. Tongue clean. The gums are swollen, and incipient salivation is coming on. He has taken broth and beef-tea, according to orders. He was ordered to have a *starch injection with laudanum*, administered immediately, and to take *castor-oil* one drachm (!) early to-morrow morning.

7. He is better to-day, and has not had any bloody dejections, or vomiting. The pulse is 100, and weak. The *injection* to be repeated.

8. Going on well; a rasher of bacon was presented for his dinner.

10. Stools good; urine high-coloured, and

abundant. Gains strength daily. Pulse and appetite stronger.

He improved daily from this period, and was made an out-patient soon afterwards.

In some clinical remarks made on this case, Dr. Seymour observed, that the hæmorrhagic flow from the bowels seemed to be of a more passive nature than usually occurs in dysenteric patients. In examining patients after death, who have died of the disease, its pathology was found to consist in an inflammatory state of the colon, with ulcerative patches, destroying the lining mucous membrane. The principal symptoms during life are no constant abdominal pain, with inclination to go to stool, with a sensation of loaded and abstracted bowel, which this man complained much of on his admission. Nothing passes from the bowels but some flatus, or a thin, glairy mucus, interspersed with scybala; and in those cases which have occurred on the Gold Coast of Africa, there was much lymph and blood in the motions. In the course of the disease portions of the membrane slough away, from which the then glairy discharge issues. The blood is symptomatic of inflammation, not ulceration. When the latter is present, the discharge resembles green tea, which is unmixed with blood, save when an artery is implicated in the slough. In this country dysentery almost yields invariably to purgative medicines. You may take it as a rule, that as long as the patient feels any abdominal obstruction, so long may you purge him in proportion to his strength. Ipecacuanha, by itself, and in combination with chalk, used formerly to be given, but castor-oil has superseded them. When the inflammatory symptoms run high you must give calomel, and when that gripes opium must be added to it. In this case the man was too weak to bear bleeding; and you will observe that when I ordered him opium alone, or in combination, it was immediately followed by a purgative. The ulceration, which sometimes continues after dysentery, is surely fatal in its effects, and is of a more chronic character than that which supervenes on some fevers. There was a case in many respects similar to the above, but it was of a more generally active character, in one of our wards some time since. The man was put upon the same plan of treatment as the above, and the disease was cured, when one day he was suddenly seized with effusion of fluid into the pericardium; and he had a dry tongue, hot skin, and quick pulse. When he sat up in bed he was obliged to lean forward, to relieve the impending difficulty of respiration. He passed urine, mixed with blood, which was a diagnostic mark of disease of the kidneys. I was fearful of his dying, from having been previously so severely weakened by dysentery. He took digitalis, in order to promote diuresis, and this relieved the symptoms very greatly for a time, but they returned; the lips became blue from congestion; about the chest the pulse got rapid and fluttering, and he died. Now all these symptoms might have arisen from disease of the heart, but then they would have come on more gradually; here, however, they were sudden and violent in their accession. I shall make some further remarks to you on this subject on a future opportunity.

THE WOMAN WHO LIVED WITHOUT EATING.

The constancy with which some individuals will endure bodily suffering, or even the absence of many things necessary to existence, for a length of time, is a curious circumstance in the history of impostors and of the insane. It is not easy to determine to which of those two classes belonged the subject of the following case:—

A woman was lately exhibited in Paris as a phenomenon, on the ground that she had taken no food for the last twenty months; she was fresh and fat, and carried a healthy child, six months old, at the breast. Not consuming any food, this woman could not be supposed to excrete; she accordingly passed no excretions, and the miracle was complete. She carried her folly, or her knavery, so far as even to enter the *Hotel-Dieu*, and place herself under the *surveillance* of a physician, M. Caillard, whom she assured that God was the father of her baby, and that he had commanded her to commence a fast in 1836. She was placed in St. Benjamin's ward, and for several days the history which she gave of herself seemed true; the food and drink placed beside her bed remained intact; no trace of excretion could be discovered. Determined to find an explanation, M. Caillard passed her over to the care of M. Magendie, who happened to have a small closet unoccupied attached to one of his wards. The woman was shut up in this apartment with some food, the quantity of which was accurately measured. She resisted the sense of hunger for eight days, but eat on the ninth. Her excretions were found carefully concealed in the mattrass, which she had sewn up again. This case is worthy of the attention of dealers in magnetism. The subject of it would be an invaluable acquisition.—*French Lancet*, Oct. 26th, 1837.

Estimation of Assistants by practising Surgeons.—The following *fact* illustrates, in some degree, the estimation in which *assistants* are held by certain members of the profession:—A practitioner, not 100 miles from Devonshire-street, Portland-place, was in want of a dispensing assistant. A gentleman applied for the situation, and had his

competency tested by translating several prescriptions, writing a label, and other little *et ceteras*. The examination proving satisfactory, he was asked what salary he expected. He said, of course, that was not for him to decide. "Twenty-five pounds is the greatest sum I give," said the practitioner. "Twenty in general. If you have five-and-twenty you must find your own tea and sugar." The latter part of the sentence was afterwards explained by the candidate for office being asked, if he had "any objection to dine with the servants, who were very respectable!" "No doubt of that," said the candidate, "but I have not been used to such company." "Did you not say that you came from S——shire. One of my maids comes from that county. Well, get a written testimonial from the gentleman you were apprenticed to, that will do; my practice is so extensive I cannot possibly call on him."

STOW UNION.

We have received letters from Mr. Kent, of Walsham, and from Mr. Bree, of Stowmarket, in answer to a letter from a correspondent, "J. H.," relative to the medical appointments at the Stow Union. We have no space for the letters, but willingly insert a summary of their contents.

Mr. Kent accuses "J. H." of having made three misrepresentations: — First. "Mr. Kent attends the poor of both Norton and Walsham." Mr. Kent assures us that he only attends the poor of Walsham (where he lives), and that Mr. Baisham attends Norton, where he lives.—Secondly. "The parish of Elenswell is several miles distant from Mr. Kent's residence." The latter named gentleman contradicts this statement; his residence is not above five miles from Elenswell.—Thirdly. "The poor from Elenswell have to go through Norton in order to get at Mr. Kent's." This is not correct; a person *may* go through Norton to get to Elenswell, but the direct road does not touch the parish of Norton by a considerable distance. In conclusion, Mr. Kent remarks that although nominally only one surgeon attends a district, and though the board may look to him for the proper management of the sick-poor of that district, yet he is at liberty to propose certain of his medical brethren to take charge of certain parishes, and the board can approve or disapprove of such assistant medical men. The latter are generally such as have attended those parishes before; hence, although only one surgeon is appointed to the Walsham district, the sick-poor are really attended by *four* medical men.

The observations contained in Mr. Bree's letter correct one or two unimportant inaccuracies into which he (Mr. B.) had fallen, and confirm the statements made by Mr. Kent.

TUBERCLES IN VARIOUS ORGANS, WITHOUT ANY TUBERCULAR FORMATION IN THE LUNGS.

The law established by M. Louis, that after the age of fifteen, tubercles are never found in any part of the body, without also existing in the lungs, admits of very few exceptions. M. Louis himself has only met with one. We extract the following from a late number of the "Bulletin Thérapeutique," remarking, however, that the state of the bronchial glands is not noticed:—

"A negro, eighteen years of age, was received on the 6th of March last into one of the surgical wards of the *Hopital Beaujon*, for a fistulous opening in the region of the sternum. The boy died suddenly, and on examining the body, tubercular abscesses were found in the eyelids, and several other parts of the body; there were softened tubercles in the prostate and right testicle; crude tubercles in the ribs, under the pleuræ, and in the brain, but none in either lung, liver, or spleen.

BOOKS RECEIVED.

Changes produced in the Nervous System by Civilization; by Robert Verity, M.D. Highley, London, 1837. 8vo. pp. 79.

Smellie's Obstetric Plates, with Explanations. Highley, London, 1837.

The Evils of the Quarantine Laws, &c.; by Captain W. White. Wilson, London, 1837. pp. 136.

Mémoire, &c., or Memoir on the Mechanical Destruction of Stone in the Bladder; by Dr. J. Béniqué. Paris, 1837.

Elements of Chemistry; by Thomas Graham, F.R.S, L. and E. Part First. London: Baillière.

Outlines of Comparative Anatomy; by R. Grant, M.D. Part Fourth. London: Baillière.

TO CORRESPONDENTS.

A Medical Student. The remedy proposed by our correspondent for the dearth of anatomical subjects, of which he complains, would not, probably, produce any effect; a petition might be presented. Much depends on the activity of the teachers at the different schools, who should make it a point to see that the subjects for dissection are equably distributed.

The report from *University College Medical Society*, together with communications from *Veritas*, *Mr. Oliver*, and several others, are unavoidably postponed.

Young and Green from the Country. We have never heard whether the advertiser is or is not competent to teach either of the subjects mentioned in his prospectus, and cannot, therefore, offer any advice on the subject.

If the writer of the letter signed *Charles Vernon* will authenticate it, we will publish his communication in our next number.